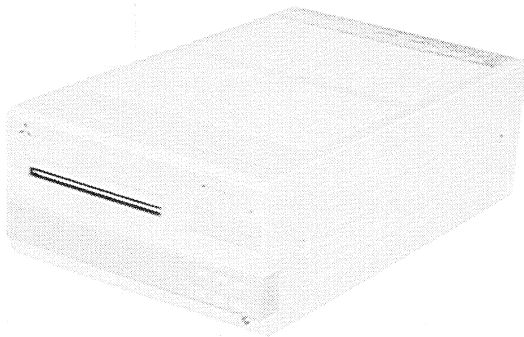
AUG. 1987

MITSUBISHI Service Manual

VIDEO COPY PROCESSOR
VIDEO COPY PROZESSOR



MODEL
P61E
P61B

ENGLISH

CAUTION

Before servicing this product, it is important that the serviceman reads the "SAFETY PRECAUTIONS" and "PRODUCT SAFETY NOTICE" in this service manual.

SPECIFICATIONS

• Power Input	AC 220V/240V 50Hz
• Power Consumption	60W
• Composite Video Signal Input	1Vp-p
• RGB TTL Signal Input	TTL level
• Parallel Data Interface	TTL level
• Print size	100mm × 74mm (3-15/16"×2-29/32")
• Print speed	14 sec/picture
• Grey tone	High grade 16 tones
• Cabinet Dimensions	8-3/8"(W) × 4-7/16"(H) × 14-3/16"(D)
• Weight	12.12 lbs

• Resolution	Composite Video Signal Input Field mode 640dots × 289 lines Frame mode 640dots × 600 lines RGB TTL Signal Input Field mode 640dots × 200 Frame mode 640dots × 400 (at interlace) Parallel Data Input 640dots 80figures

FEATURES

- Positive/Negative print selection
- Direction Selector
- Selectable contrast
- Video input level control
- Wired remote control

GERMAN

VORSICHT

Vor jeder Reparatur sind die allgemeinen Vorsichtsmaßnahmen und die Hinweise für die Produktsicherheit in diesem Service Manual zu beachten.

Technische Daten

• Netzspannung:	AC 220V/240V 50Hz
• Leistungsaufnahme:	60W
• FBAS Eingang:	$1V_{ss}$
• RGB TTL Signaleingang:	TTL-Pegel
• Parallel-Daten-Schnittstelle:	TTL-Pegel
• Druckgröße:	100mm × 74mm
• Druck-geschwindigkeit:	14 sec/Bild
• Grauabstufung:	16 Stufen hochauflösend
• Abmessungen:	8-3/8" (B) × 4-7/16" (H) × 14-3/16" (T)
• Gewicht:	5.5 kg (12.12 lbs)

• Auflösung:	FBAS-Eingang Halbbild Mode 640 Punkte × 289 Zeilen Vollbild Mode 640 Punkte × 600 Zeilen RGB TTL Eingang: Halbbild Mode 640 Punkte × 200 Vollbild Mode 640 Punkte × 400 (Zwischenzeilenverfahren)

MERKMALE

- positiv/negativ Ausdruck
- Richtungsauswahl
- wählbarer kontrast
- Videoeingangspegel-Kontrolle
- Kabelfernbedienung

MITSUBISHI ELECTRIC CORPORATION

ENGLISH

SAFETY PRECAUTIONS

NOTICE. Observe all cautions and safety related notes located inside the receiver cabinet and on the receiver chassis.

LEAKAGE CURRENT CHECK

Before returning the receiver to the customer, it is recommended that leakage current be measured according to the following methods.

Cold Check

With the AC plug removed from the Power source, place a jumper across the two AC plug prongs. Turn the receiver AC switch on. Using an ohm-meter, connect one lead to the jumped AC plug and touch the other lead to each exposed metal part (antennas, handle bracket, metal cabinet, screwheads, metal overlays, control shafts, etc.), particularly any exposed metal part having a return path to the chassis. Exposed metal parts having a return path to the chassis should have a minimum resistance reading of 1 megohm. Any resistance below this value indicates an abnormality which requires corrective action. Exposed metal parts not having a return path to the chassis will indicate an open circuit.

PRODUCT SAFETY NOTICE

Many electrical and mechanical parts in video copy processor have special safety related characteristics.

These characteristics are often not evident from visual inspection nor can the protection afforded by them necessarity be obtained by using replacement components rated for higher voltage, wattage, etc.

Replacement parts which have these special safety characteristics are identified in this service manual.

Electrical components having such features are identified by shading on the schematic diagram and the parts list of this service manual and by marking on the supplementary sheet for this chassis to be issued subsequently. Therefore replacements for any safety parts should be identical in value and characteristics.

SICHERHEITSHINWEISE

ANMERKUNG: Beachten Sie alle Vorsichts-und Sicherheitshin-weise auf dem Chassis und der Gehäuse-Innenseite.

Fehlerstrom Prüfung:

Vor der Auslieferung des Gerätes an den Kunden ist es empfehlenswert, eine Überprüfung des Fehlerstroms nach folgender Methode vorzunehmen:

Ziehen Sie den Netzstecker aus der Steckdose, und Überbrücken Sie die beiden Anschlußstifte des Netzsteckers. Klemmen Sie einen Anschluß eines Ohm-Meters an die Anschlußstifte des Netzsteckers und den anderen Anschluß an ein freies, blankes Metallteil des Gehäuses (Schrauben, Antennenanschluß o.ä.). Diese blanken Metallteile haben in der Regel eine galvanische Verbindung mit dem Chassis.
Der vom Ohm-Meter angezeigte Widerstandswert sollte größer als 1 MOhm betragen. Jeder Widerstandswert, der kleiner als 1 MOhm ist, deutet auf einen zu großen Fehlerstrom hin. Die Ursache ist zu ergründen. Zeigt das Ohm-Meter keinen Widerstandswert an, hat das entsprechende Metallteil (Schraube, Antennenanschluß o.ä.) keine Verbindung mit dem Chassis. Wählen Sie eine andere Kontaktfläche.

HINWEISE ZUR PRODUKTSICHERHEIT

Einige elektronische und mechanische Teile im Inneren des Video Copy Prozessor besitzen Eigenschaften, die für die Produktsicherheit wichtig sind.
Diese Eigenschaften sind oft nicht sichtbar. Ebenso genügt es nicht, bei der Erneuerung eines Sicherheitsbauteils einen höheren Spannungswert oder eine größere Belastbarkeit vorzunehmen.

– Sicherheitsbauteile sind in diesem Service Manual gekennzeichnet. –

Elektronische Bauteile, die für die Produktsicherheit notwendig sind, sind im Schaltbild und der Ersatzteilliste dieses Service Manuals grau unterlegt. Mechanische Sicherheitsbauteile sind ebenso gekennzeichnet.

– Sicherheitsbauteile sind nur durch Originalteile zu ersetzen. –

DISASSEMBLY PROCEDURE

Printed Circuit Board (PCB) Inspection Methods

PCB:
Power supply
Video copy
Video
Terminal
Switch-P
LED-P

- Remove four cabinet fastening screws, (Fig. 2-1).
  Raise the front panel slightly and push it away to remove the front panel (Fig. 2-2).

- Power Supply PCB

1. As shown in Fig. 2-2, remove four screws fastening the power supply unit. Also remove three grounding wires fastened by the fastening screws.
   Raise and turn the power supply unit to remove the unit from the chassis.
2. To inspect the rear side (foil side) of the power supply PCB, remove three screws fastening the power supply PCB and six screws fastening the heat sink.
   (Note) The heat sink of the power supply unit is double construction. Remove the power supply PCB so that it shall not remain fastened to the outside heat sink.

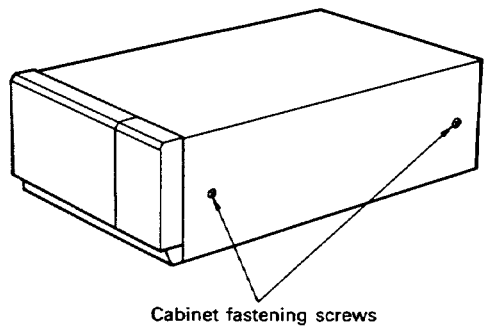


Fig. 2-1

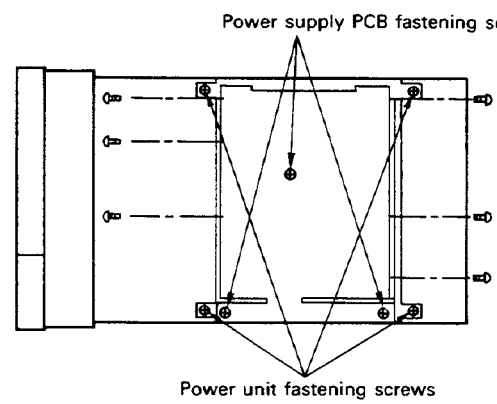


Fig. 2-2

DEMONTAGE

Überprüfung der Platinen

Power Supply
Video Copy
Video
Terminal
Switch-P
LED-P

- Entfernen Sie die 4 Gehäuseschrauben (Abb. 2-1)

- Power Supply Einheit

1. Wie in der Abb. 2-2 gezeigt wird, entfernen Sie die 4 Befestigungen der Netzteileinheit (Power Supply) und die 3 Massekabel.
   Heben Sie die Netzteileinheit an und drehen Sie die Einheit zur Seite.
2. Damit Sie die Rück-(Beschichtete) Seite der Platine überprüfen können, entfernen Sie die 3 Schrauben der Netzteilplatine und die 6 Schrauben des Kühlbleches.
   (Hinweis) Das Kühlblech besteht aus 2 Teilen. Entfernen Sie die Platine so, daß sie nicht mehr mit dem äußeren Teil des Bleches verbunden ist.

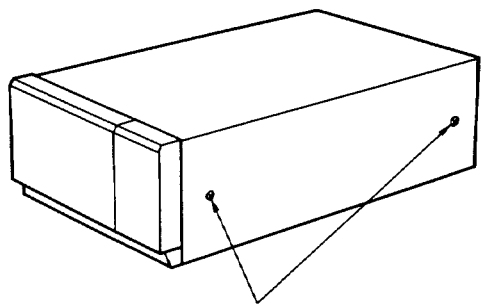


Abb. 2-1

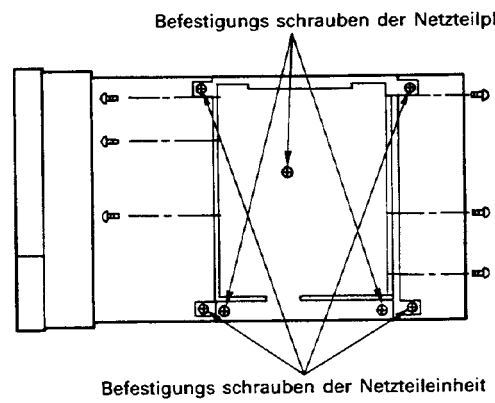


Abb. 2-2

MODEL P61U DISASSEMBLY PROCEDURE

PCB INSPECTION METHODS

- Video Copy PCB (Double-sided PCB)

1. The front side (part side) of the video copy PCB can be almost checked by removing the power supply unit as shown in Fig. 2-2.
   All the parts of the video copy PCB can be checked by unscrewing two front panel fastening screws (Fig. 2-3), disconnecting two grounding wires secured by the screws and removing the front section from the chassis.
2. To check the rear side of the video copy PCB, remove two screws fastening the PCB (Fig. 2-4), disconnect all the connectors from the PCB, and remove the PCB from the chassis.

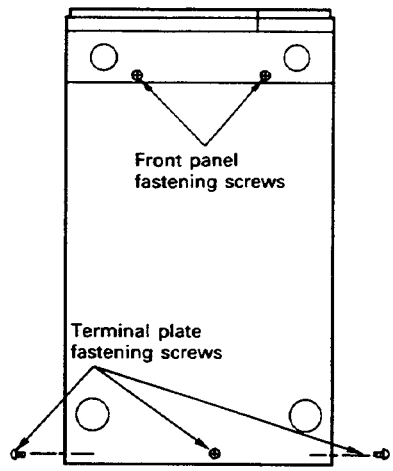


Fig. 2-3

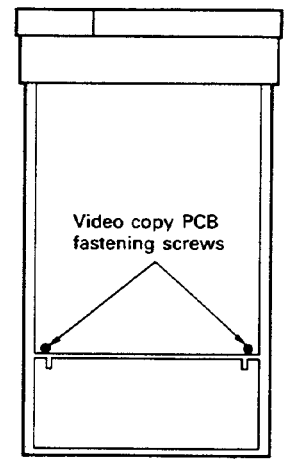


Fig. 2-4

- Video PCB (Double-sided PCB)

1. The front side (part side) of the video PCB can be checked by removing the power supply unit as shown in Fig. 2-2.
2. To check the rear side of the PCB, unscrew five screws fastening the terminal plate (Fig. 2-3), disconnect all the connectors from the PCB, remove the PCB to the rear side, and check the PCB.

- Terminal PCB

1. Remove the terminal plate as in the video PCB removing method. Unscrew two screws fastening the terminal PCB and check the PCB.

- Switch-P PCB

1. Unscrew two screws fastening the front panel (Fig. 2-3), and separate the front section from the chassis.
2. Unscrew two screws (refer to the disassembly diagram) fastening the switch-P PCB and remove the PCB from the front panel for checking.

- LED-P PCB

1. Remove the front section from the chassis as in the removing method of the switch-P PCB.
2. Unscrew two screws (refer to the disassembly diagram) fastening the LED-P PCB and remove the PCB from the front panel for checking.
   To check all the PCBs with the power supply turned on, remove the frame (refer to the disassembly diagram) and inspect them. The grounds must be reconnected with clip leads for normal operation.

DEMONTAGE

ÜBERPRÜFUNG DER PLATINEN

- Video Copy PCB

1. Die Bestückseite der Video Copy Platine kann überprüft werden, wenn die Netzteileinheit entfernt wurde (siehe Abb. 2-2).
   Alle Teile der Platine können überprüft werden, wenn die beiden Schrauben der Frontblende entfernt werden (Abb. 2-3), die beiden Masseanschlüsse und die Frontblende von Chassis abgenommen werden.
2. Zur Überprüfung der Rückseite der Platine sind die beiden Befestigungsschrauben zu lösen (Abb. 2-4), alle Stecker der Platine abzuziehen und die Platine zu entnehmen.

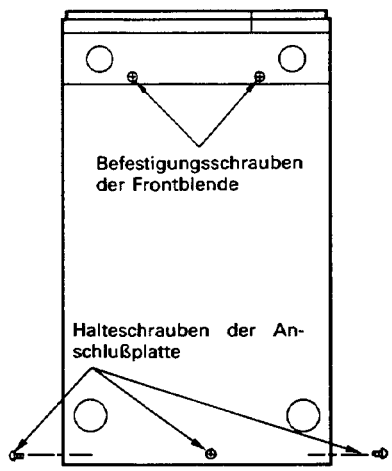


Abb. 2-3

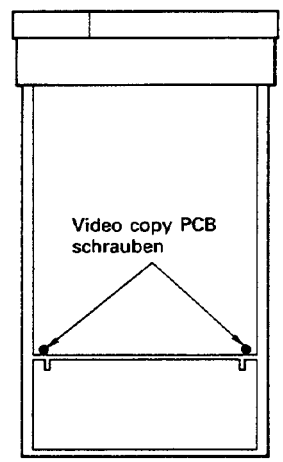


Abb. 2-4

- Video PCB

1. Die Bestückungsseite der Platine kann überprüft werden, wenn die Netzteileinheit entfernt wurde (siehe Abb. 2-2).
2. Durch Lösen der 5 Befestigungsschrauben der Anschußplatte (Abb. 2-3), Abziehen aller Stecker und nach hinten Klappen der Videoplatine wird die Rückseite der Platine zugänglich.

- Terminal PCB

1. Entfernen Sie die beiden Schrauben der Terminalplatine und überprüfen Sie die Platine.

- Switch-P PCB (Schalterplatine)

1. Entfernen Sie die 2 Halteschrauben der Frontblende und separieren Sie den vorderen Teil vom Chassis.
2. Lösen Sie die 2 Schrauben der Platine (siehe Explosionszeichnung) und ziehen Sie die Platine aus der Frontblende.
   Wenn die Platinen bei eingeschaltetem Netzteil überprüft werden sollen, entfernen Sie den Rahmen (siehe Explosionszeichnung). In diesem Fall müssen alle Masseanschlüsse hergestellt werden.

DISASSEMBLY PROCEDURE

REMOVAL OF VIDEO COPY ASSEMBLY

1. If heat sensitive recording paper is loaded, cut the paper at the paper feeding port, press the FEED button, and drive all the paper out of the printer.
2. Pull out the knob of the paper replacement lever.
   (Note) If the lever is not removed beforehand, the lever may be lost when the printer assembly is removed from the front panel. It must be removed first.
3. Unscrew four right and left screws fastening the cabinet and two underside screws fastening the front panel. Disconnect the connectors from the printer assembly and the video copy PCB.
4. Remove four printer assembly fastening screws (Fig. 2-5) and two screws fastening the right and left grounding wire to the power supply unit. Take the printer assembly rearwards out of the front panel.

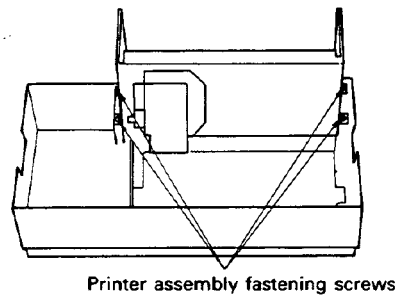


Fig. 2-5

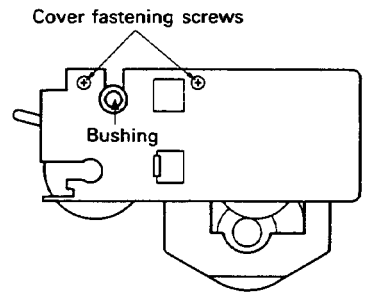


Fig. 2-6

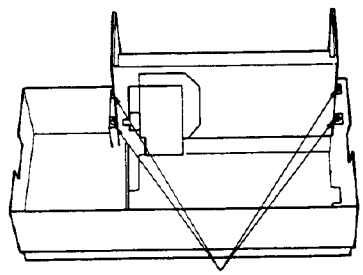
REMOVAL OF THERMAL HEAD

5. Remove four cover fastening screws from the upper part of the printer assembly. (Fig. 2-6)
   (Note) Press the cover firmly downward when removing the screws, as since the cover is pushed upward by two springs (2.7kg × 2pc).
6. Turn the bushes located on two sides of the upper head assembly 90° with a small flat screwdriver or forceps, and raise the assembly upwards to separate it from the case (refer to the disassembly diagram)
   (Note) Exercise care so that the right and left bushes do not come off the shaft A.

DEMONTAGE

Ausbau der Video-Copy Einheit

1. Sollte Thermopapier eingelegt sein, entfernen Sie dieses.
2. Ziehen Sie den Knopf des Papier-Entriegelungshebels ab.
   (Hinweis) Entfernen Sie den Kopf zuerst, weil er evtl. bei Ausbau der Printereinheit verloren gehen könnte.
3. Entfernen Sie die 4 Gehäuseschrauben und die beiden Befestigungsschrauben der Frontblende. Lösen Sie alle Steckverbindungen der Printereinheit.
4. Entfernen Sie die 4 Befestigungsschrauben der Printereinheit (Abb. 2-5) und die beiden Masseanschlüsse. Nehmen Sie die Printereinheit nach hinten heraus.



Befestigungsschrauben der Video-Copy-Einheit

Abb. 2-5

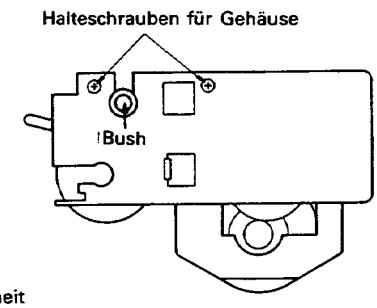


Abb. 2-6

Ausbau des Thermokopfes

5. Entfernen Sie die 4 Halteschrauben des Printergehäuses (Abb. 2-6).
   (Hinweis) Drücken Sie das Gehäuse beim Lösen der Schrauben nach unten.
6. Drehen Sie die beiden Buchsen rechts und links um 90° mit einem kleinen, flachen Schraubendreher oder einer Pinzette und nehmen Sie die Einheit nach oben heraus.
   (Hinweis) Achten Sie auf die beiden Buchsen A.

DISASSEMBLY PROCEDURE

REMOVAL OF THERMAL HEAD

7. Remove the bushes A ⑤ and bushes B ⑥ from the left side of the shaft A ④. Remove the bushes A ⑤, gear B ⑧, tongued washer ⑦, and bush B ⑥ from the right side of the shaft A. Remove the shaft A from the thermal head mounting fitting (black).
8. Replace the thermal head assembly. (Fig. 2-8, 2-9)
9. Reassemble the removed parts in the reversed order of the above disassembling steps.
10. After the thermal head is replaced check to see that it reproduces the 16 step tone test pattern properly. It not perform the thermal head voltage adjustment on page 28.

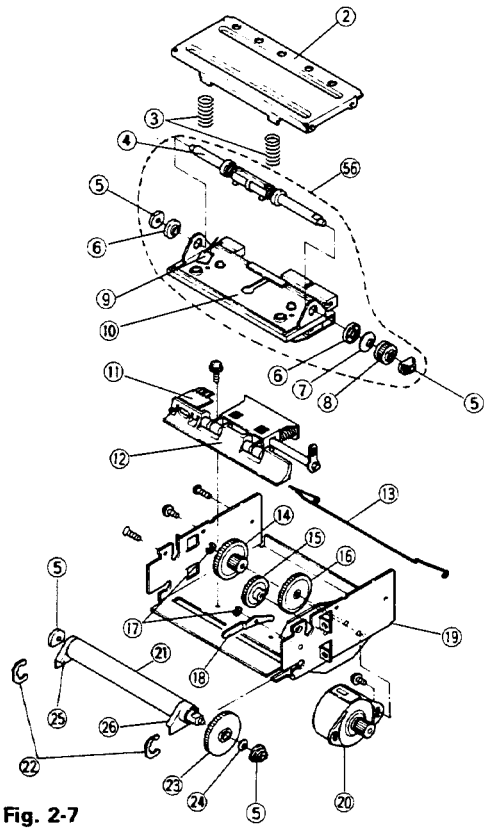


Fig. 2-7

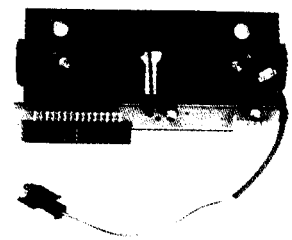


Fig. 2-8

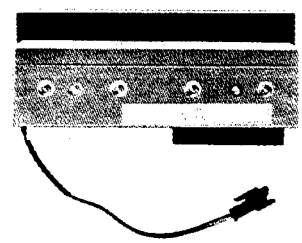


Fig. 2-9

RUBBER ROLLER INSPECTION AND CLEANING

- Rubber Roller Inspection and Cleaning
  If the rubber roller of the platen assembly is heavily fouled with printing paper dust or dirt, the printed picture may be poor. In this case, check and clean the roller in the following steps.

1. Open the door of the front panel, cut the recording paper at the feed port, and press the FEED button for driving all the paper out of the printer.
2. Raise the paper replacing lever and remove the knob. (Fig. 2-10)
3. Remove two screws fastening the cutter panel. (Fig. 2-10)
4. Remove dirt and dust from the rubber roller with soft brush or alcohol.
   (Note) If the rubber roller is scuffed, replace the platen assembly ㉑. (Fig. 2-7)

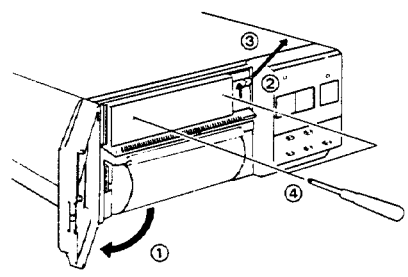


Fig. 2-10

DEMONTAGE

Ausbau des Thermokopfes

7. Entfernen Sie die Buchse A ⑤ B ⑥, auf der linken Seite der Welle A ④. Ziehen Sie die Teile ⑤, ⑧, ⑦, und ⑥ von der Welle A (rechte Seite). Entnehmen Sie die Welle A aus der schwarzen Thermokopfhalterung.
8. Die Thermokopfeinheit (Abb. 2-8, 2-9) kann erneuert werden.
9. Die Einheit in umgekehrter Reihenfolge wieder zusammensetzen.
10. Nachdem der Thermokopf erneuert wurde, überprüfen Sie, ob die 16 Graustufen des Testbildes (S. 29) wiedergegeben werden. Wenn nicht, überprüfen Sie die Kopfspannung (S. 29).

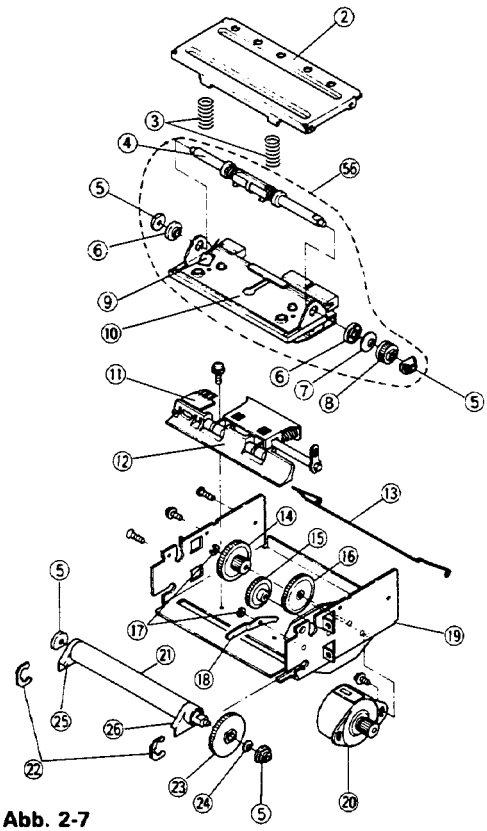


Abb. 2-7

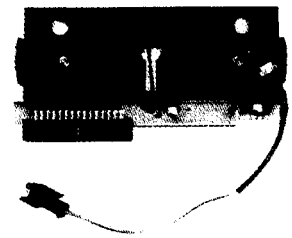


Abb. 2-8

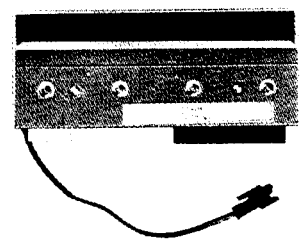


Abb. 2-9

REINIGUNG DER WALZE

- Überprüfen und Reinigen der Walze

1. Öffnen Sie die Klappe der Frontblende, schneiden Sie das Papier vor der Eintrittsöffnung ab und entfernen Sie den Rest mittels der Taste FEED.
2. Drücken Sie den Papier-Entriegelungshebel nach oben und entfernen Sie den Kopf (Abb. 2-10).
3. Bauen Sie das Messer (Cutter panel, Abb. 2-10) aus.
4. Reinigen Sie die Walze mit einer weichen Bürste und Alkohol.

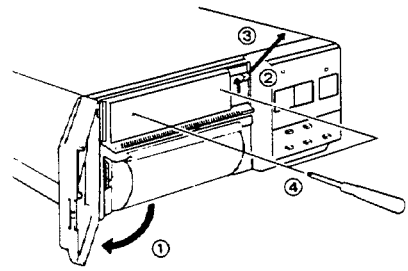


Abb. 2-10

DISASSEMBLY PROCEDURE

THERMAL HEAD CLEANING

- Thermal Head Cleaning
  Stains or white vertical lines may appear on the printed picture if the thermal head of the video copy processor is fouled with dust and dirt. In this case, use a cleaning sheet (859D01501) in the following steps. The cleaning sheet is available from us.

- Thermal Head Cleaning Steps

1. Open the door and raise the paper replacing lever.
2. Cut the heat sensitive recording paper with a knife around the feed port.
3. Remove the recording paper from the unit.
4. Lower the paper replacing lever.
5. Press the PRINT or FEED button for removing the remaining recording paper out of the unit.
6. Raise the paper replacing lever.
7. Introduce the leading edge of the cleaning sheet in the feed port. (Fig. 2-11)
   (Note) Feed the cleaning sheet with the carbon coated side (black) face up.
8. Lower the paper replacing lever.

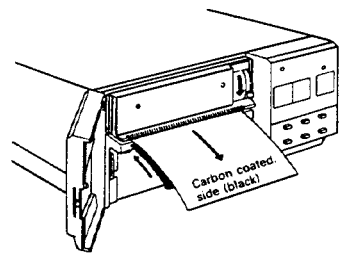


Fig. 2-11

9. Press the FEED button to carry the cleaning sheet till the entire sheet is delivered out.
   (Note) If the paper is not carried by pressing the FEED button, take out the cleaning sheet and put it again to the feed port as deep as possible.
   If the sheet is fed crooked, the sheet may be creased and can not be reused. Check and be sure that the sheet is fed squarely.
   Bear in mind that the FEED and other buttons and switches do not work if the INPUT button is pressed or the switch is set the PARALLEL position.
10. Insert the cleaning sheet two or three times in the above procedure. Check the effect of cleaning by charging heat sensitive recording paper in the set and printing two or three sheets.
    (Note) If the symptom is not corrected by the cleaning sheet, the unit may be faulty. Located and correct the cause.
    Store the cleaning sheet in a cold and dark place free from the direct rays of the sun. The cleaning sheet is designed for cleaning the thermal head.
    Don't use the cleaning sheet for any other purpose.

DEMONTAGE

REINIGUNG DES THERMOKOPFES

Reinigen des Thermokopfes
Erscheinen auf einem Ausdruck Streifenmuster oder vertikale weiße Linien, ist wahrscheinlich der Thermokopf verschmutzt. Reinigen Sie den Thermokopf mit dem beigefügten Tuch unter Beachtung der folgenden Hinweise:

Reinigung

1. Öffnen Sie die Tür, und heben Sie den Papier-Entriegelungshebel an.
2. Trennen Sie das Thermopapier an der Papierführung ab.
3. Entnehmen Sie die Papierrolle.
4. Drücken Sie den Papier-Entriegelungshebel wieder nach unten.
5. Drücken Sie die PRINT-oder die FEED-Taste, damit das restliche Papier entfernt wird.
6. Heben Sie den Papier-Entriegelungshebel wieder an.
7. Führen Sie das Reinigungstuch in den Papierschacht ein (schwarze Carbon-Seite nach oben).
   ANMERKUNG:
   Die Stand-By Anzeige leuchtet in diesem Moment nicht auf.
8. Drücken Sie den Papier-Entriegelungshebel wieder nach unten.

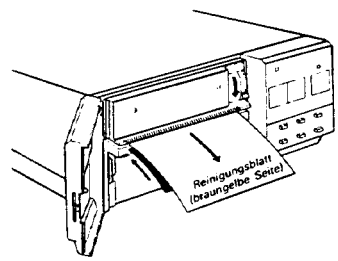


Abb. 2-11

9. Drücken Sie die FEED-Taste und vergewissern sie sich, daß das komplette Reinigungstuch wieder herauskommt.
   Beweget sich das Reinigungstuch nicht durch das Drücken der FEED-Taste, Wiederholen Sie den Vorgang noch einmal. Führen Sie das Reinigungstuch hierbei tiefer ein. Achten Sie darauf, daß das Reinigungstuch gerade eingeführt wird; andernfalls wird das Reinigungstuch zerknittert und ist nicht mehr zu gebrauchen. Befindet sich der INPUT-WAhlschalter in der Stellung PARALLEL, reagiert das Gerät nicht auf das Drücken der FEED-oder einer anderen Taste.
10. Wiederholen Sie die Reinigung zwei-bis dreimal. Laden Sie anschließend das Thermopapier, und führen Sie einige Drucke aus.

Sind die Fehlersymptome (vertikale Linien, Streifen usw.) nicht beseitigt, ist eine Reparatur des Gerätes erforderlich.
Bewahren Sie das Reinigungstuch an einem dunklen und kühlen Ortauf. Halten Sie es fern von kindern.
Das Reinigungstuch ist nur zur Reinigung von Thermoköpfen vorgesehen. Benutzen Sie es niemals für andere Zwecke.

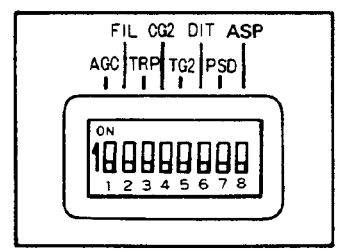
■ DIP Switch Function

- The following eight functions are selectable.

Bit	Symbol	Function	
1	AGC	Automatic gain adjustment	ON/OFF
2	FIL	Comb filter	ON/OFF
3	TRP	Chrominance signal trap	ON/OFF
4	CG2	Composite signal binary conversion	ON/OFF
5	TG2	RGB TTL Signal binary conversion	ON/OFF
6	DIT	Dither disabling	ON/OFF
7	PSD	Printing direction sub-switching	ON/OFF
8	ASP	Aspect Ratio (side-to-vertical ratio)	ON/OFF

(1) Bit 1 (AGC): Selection of Automatic Gain Adjustment

- ON: In this position, a generally dark picture is automatically adjusted to a bright and crisp picture for printing.
  The principle is to make the brightest level in the video signal to a given level, regardless of the sync pulse level.
  In the on position, the input level control is not workable.
- OFF: In this position, the INPUT LEVEL control is workable.
  The adjustable range is 1Vp-p ±0.3V



(2) Bit 2 (FIL): Comb filter

(3) Bit 3 (TRP): Selection of a chrominace signal trap

LINES	Bit 2	Bit 3	Signal Processing
525 (NTSC)	OFF	OFF	Through
	ON	OFF	Comb filter on
	OFF	ON	3.58MHz trap on
	ON	ON	As Above
625 (PAL)	OFF	OFF	Through
	ON	OFF	Through
	OFF	ON	4.43MHz trap on
	ON	ON	As Above

- Ghost-like interference may appear in the output picture at the than NTSC system horizontal sync pulse frequency 15.734kHz with bit 2 ON and bit 3 OFF because of comb filter effect.
- To prints RGB-TTL signal or monochrome signal, set both bit 2 and 3 to OFF (i.e., through mode).

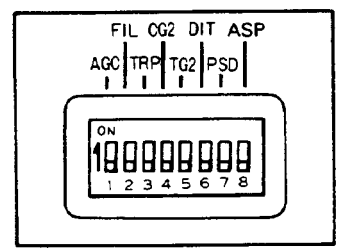
■ DIP SCHALTER

- Die folgenden acht Funktionen sind anwählbar.

Bit	Symbol	Funktion	
1	AGC	Automatische Verstärkungs Regelung	ON/OFF
2	FIL	Comb Filter	ON/OFF
3	TRP	Farbhilfsträgerfalle	ON/OFF
4	CG2	Schwellenpegel	ON/OFF
5	TG2	RGB Signale hochpegelig	ON/OFF
6	DIT	Dither	ON/OFF
7	PSD	Druckrichtungswahl schalter	ON/OFF
8	ASP	Seitenverhältnis	ON/OFF

(1) Bit 1 (AGC): Automatische Verstärkungsregelung

- ON: In dieser Position wird das zu druckende Videosignal automatisch auf einen optimalen Helligkeits— und Schärfewert eingestellt. Als Bezugspegel dient der höchste Videosignalpegel, die Regelung ist unabhängig von der Größe des Syncronimpulses.
  In der ON Position ist der Regler INPUT LEVEL nicht aktiv.
- OFF: Regler INPUT LEVEL eingeschaltet. Einstellbereich 1 Vp-p±0,3 V.



(2) Bit 2 (FIL): Comb Filter

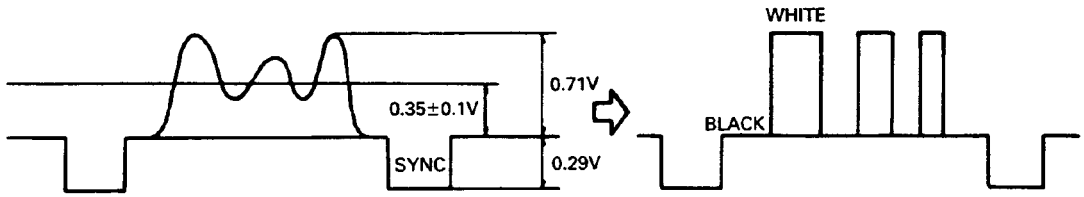
(3) Bit 3 (TRP): Farbhilfsträgerfalle

LINES	Bit 2	Bit 3	Signale Verarbeiten
525 (NTSC)	OFF	OFF	Durch
	ON	OFF	Comb Filter
	OFF	ON	3.58MHz Sperr-keis
	ON	ON	siehe oben
625 (PAL)	OFF	OFF	Durch
	ON	OFF	Durch
	OFF	ON	4.43MHz Sperr-kreis
	ON	ON	siehe oben

- Bei NTSC sind Fehldrucke bzw. Geisterbilder möglich, wenn Bit 2 auf ON und Bit 3 auf OFF stehen (Comb Filter Effekt).
- Sollen RGB-TTL Signale bzw. Schwarz/Weiß Signale ausgedruckt werden, beide Schalter (Bit 2 und 3) in die OFF Position bringen.

(4) Bit 4 (CG2): Selection of binary or hexa-decimal levels of composite signal.
ON: Binary levels are determined in reference to 50% of (0.35 ± 0.1V) the video signal peak value.
- The reference voltage binary conversion is adjustable by the THRESHOLD LEVEL control located at the bottom of the video copy processor.

OFF: 16 tone steps (illusory 64 tone steps)

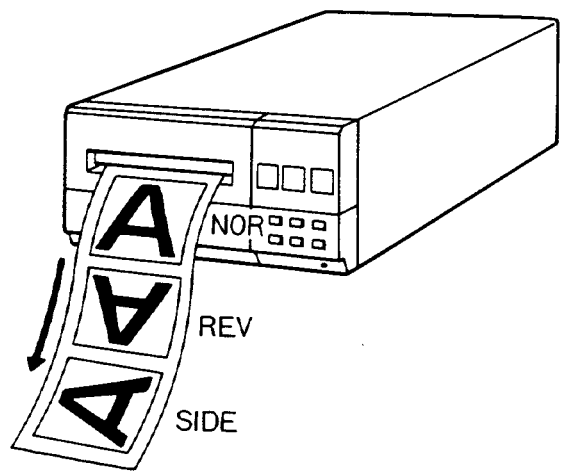


(5) Bit 5 (TG2): Selection of binary or octal RGB-TTL signal levels
ON: White level if either of R,G and B is high level
Black level at low level of all R, G and B
OFF: 8 steps of tone (illusory 32 tone steps)

(6) Bit 6 (DIT): Selection of dither
ON: 16 steps of tone (No dither)
OFF: Illusory 64 steps of tone

(7) Bit 7 (PSD): Selection of printing direction
A printing direction, NOR/REV or NOR/SIDE, is selected by the DIRECTION button on the front panel.

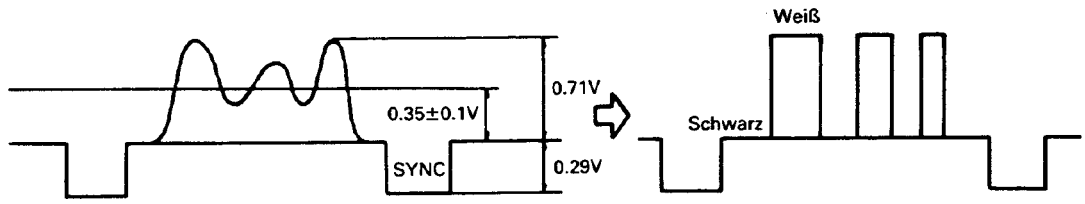
PSD	Selection of direction
ON	NOR/SIDE
OFF	NOR/REV



(8) Bit 8 (ASP): Selection of aspect ratio (side-to-vertical ratio).
ON: Aspect Ratio of 1:1
OFF: Aspect Ratio of 4:3
For X-ray picture signals and other special signals, it would be possible to print with an Aspect Ratio of 1:1.
For visual reproductions of normal signals, set it at OFF position.

(4) Bit 4 (CG2): Selektion von binär— oder hexadezimalen Pegeln des Videosignals.
ON: Der Bezugspegel liegt bei 50% (0,35 V±0,1 V) des Videosignals.
- Die Referenzspannung für die Binärkonvertierung kann mittels des Reglers THRESHOLD LEVEL verändert werden. Er befindet sich auf der Unterseite des Gerätes.

OFF: 16 Grauabstufungen (pseudo 64)

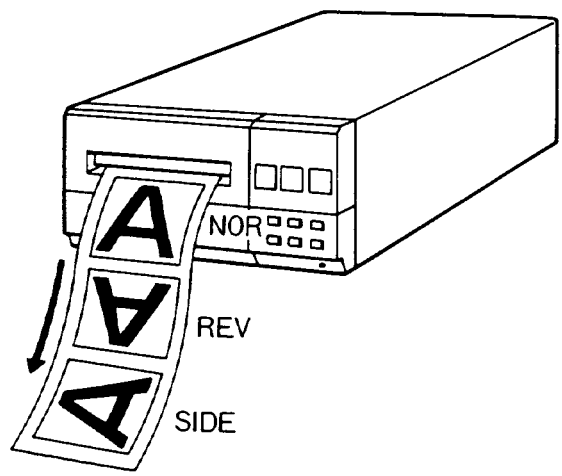


(5) Bit 5 (TG2): Selektion von binär— oder octal RGB TTL Pegeln
ON: Weiß, wenn einer der R, G und B Level high Schwarz, wenn einer der R, G und B Level low.
OFF: 8 Grauabstufungen (pseude 32)

(6) Bit 6 (DIT): Dither Effekt.
ON: 16 Grauabstufungen (ohne Dither)
OFF: Pseudo 64 Grauabstufungen

(7) Bit 7 (PSD): Druckrichtungswahl
Die Richtungen NOR/REV oder NOR/SIDE sind anwählbar.

PSD	Druckrichtung
ON	NOR/SIDE
OFF	NOR/REV



(8) Bit 8 (ASP): Selektion des Bild-Seitenverhältnisses
ON: Seitenverhältnis von 1:1
OFF: Seitenverhältnis von 4:3
Für Röntgenbilder und andere speziellen Signale ist es möglich, Bilder mit einem Seitenverhältnis 1:1 auszudrucken.
Für "normale" Signale den Schalter in die OFF-Stellung bringen.

ALIGNMENT PROCEDURE

Set the switches at the front panel and the rear panel to the following positions prior to electrical adjustment.

Front panel controls
- POWER switch .....ON
- CONTRAST swich.....NORMAL
- PRINT switch.....POSI
- DIRECTION switch.....NORMAL

Rear panel controls
- INPUT.....VIDEO position
- PAPER.....SUPER position
- SCAN .....FRAME position
- LINES .....625 position
- INPUT LEVEL.....Click stop position
- IMP.....75Ω position
- VIDEO IN.....Standard colour bar signal
  1Vp-p, 80% modulation
- PICTURE .....Click stop position
- DIP SW.....Set the following switches

S8955 (DIP Switch)

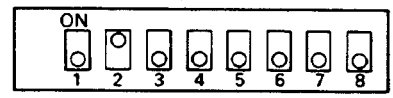
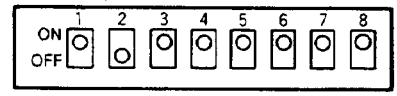


Fig. 3-1

ADJUSTING ITEM	ADJUSTING POINT	ADJUSTING METHOD
PAPER SENSITIVITY	**S8000**	This switch is to set proper darkness with a specific type of thermal paper. Make sure the switch is set as shown in Fig. 3-2. S8000 (Paper sensitivity switch)  Fig. 3-2

ABGLEICH

Setzen Sie vor dem Abgleich alle Schalter auf der Front-und Rückseite in die folgenden Positionen:

Schalter auf der Frontseite:
- POWER Schalter .....ON
- CONTRAST Schalter.....NORMAL
- PRINT Schalter.....POSI
- DIRECTION Schalter.....NORMAL

Schalter auf der Rückseite:
- INPUT.....VIDEO position
- PAPER.....SUPER position
- SCAN.....FRAME position
- LINES.....625 position
- INPUT LEVEL.....Click stop position
- IMP.....75 Ohm position
- VIDEO IN.....Standard PAL Farbbalken
  Eingangspegel: 1 Vp-p
  Modulationsfaktor: 80%
- PICTURE .....Clik stop position
- DIP schalter.....Position der schalter

S8955 (DIP Schalter)

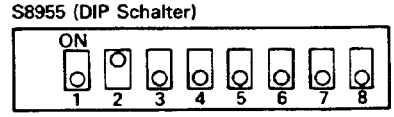


Abb. 3-1

Abgleich	Abgleichpunkt	Abgleichmethode
PAPIER-EMPFINDLICH-KEIT	**S8000**	Schalten Sie die Schalter von S8000 (siehe Abb 3-2). Die Schalter bestimmen die richtige Dunkelheit bei einem speziellem Thermopapier.

S8000 (Empfindichkeitsschalter)

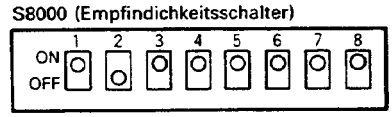
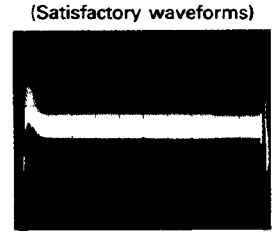
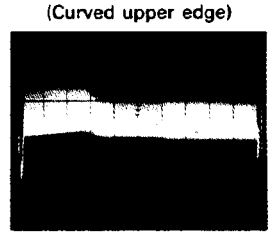
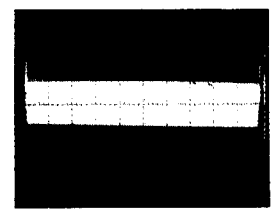
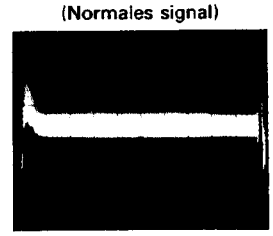
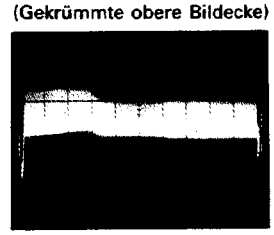
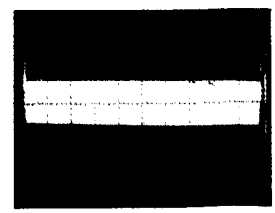


Abb. 3-2

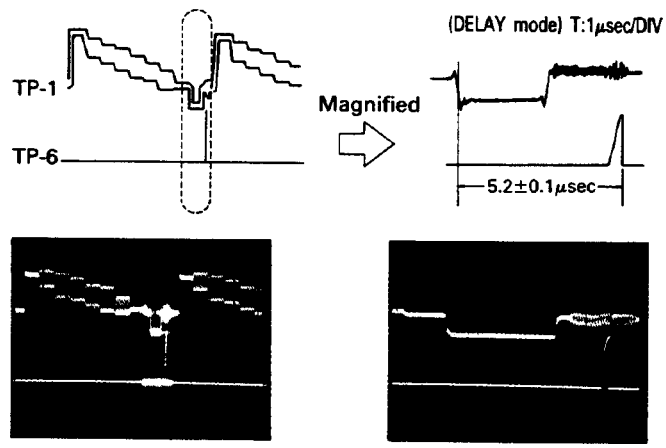
ALIGNMENT PROCEDURE

ADJUSTING ITEM	ADJUSTING POINT	ADJUSTING METHOD
VERTICAL FREQUENCY	**VR8006** **VR8008**	1. Set LINES switch S8953 to 625. 2. Short testpoint TP-4 and Ground. (No V-sync signal) 3. Connect a Frequency counter to testpoint TP-5. 4. Re-adjust VR8008 for 45±1Hz reading on the counter. 5. Set LINES switch S8953 to 525. 6. Re-adjust VR8006 for 55±1Hz reading on the counter. 7. Feed a PAL standard signal to VIDEO input terminal and remove short-circuit between TP-4 to Ground. At this point the frequency reading should now be 50Hz.
HORIZONTAL FREQUENCY	**VR8004**	1. Set LINES switch S8953 to 625. 2. Feed a Standard colour bar signal to VIDEO input terminal. 3. Connect an osilloscope to testpoint TP-10. V. scale; 10mV/DIV. H. scale; 2msec/DIV. Probe 10:1 4. Re-adjust VR8004 so that waveforms shall be as shown in Fig. 3-3-(a). Fig. 3-3-(b): Waveform due to the VR set counterclock wise from normal position. Fig. 3-3-(c): Waveform due to the VR set clockwise from normal position. (Satisfactory waveforms)  **Fig. 3-3-(a)** (Curved upper edge)  **Fig. 3-3-(b)** (Curved upper edge)  **Fig. 3-3-(c)**

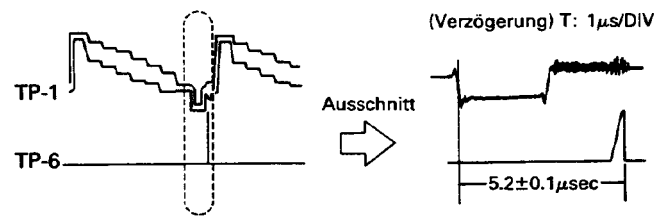
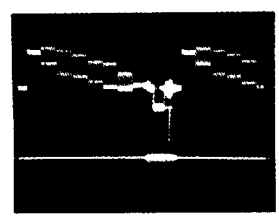
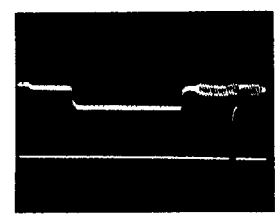
ABGLEICH

Abgleich	Abgleichpunkt	Abgleichmethode
VERTIKAL-FREQUENZ	**VR8006** **VR8008**	1. Stellen Sie den Zeilenschalter S8953 auf 625. 2. Schließen Sie Testpunkt TP-4 mit Masse kurz. 3. Schließen Sie einen Frequenzzähler an TP-5 an. 4. Stellen Sie mit VR8008 eine Frequenz von 45±1 Hz ein. 5. Stellen Sie den Zeilenschalter S8953 auf 525. 6. Stellen Sie mit VR8006 eine Frequenz von 55±1 Hz ein. 7. Schließen Sie ein PAL-Farbbalkensignal an die VIDEO IN-Buchse an, und entfernen Sie den Kurzschluß an TP-4. Der Frequenzzähler sollte jetzt 50 Hz anzeigen.
HORIZONTAL-FREQUENZ	**VR8004**	1. Stellen Sie den Zeilenschalter S8953 auf 625. 2. Schließen Sie ein PAL-Farbbalkensignal an die VIDEO IN-Buchse an. 3. Schließen Sie einen Oszillografen an TP-10 an. V. Scale; 10 mV/DIV. H. Scale; 2 ms/DIV. Tastkopf 10:1 4. Stellen Sie mit VR 8004 ein Signal nach Abb 3-3-(a) ein. Abb. 3-3-(b): Signal durch Verstellen von VR 8004 im Gegenuhrzeigersinn. Abb. 3-3-(c): Signal durch Verstellen von VR 8004 im Uhrzeigersinn. (Normales signal)  **Abb. 3-3-(a)** (Gekrümmte obere Bildecke)  **Abb. 3-3-(b)** (Gekrümmte obere Bildecke)  **Abb. 3-3-(c)**

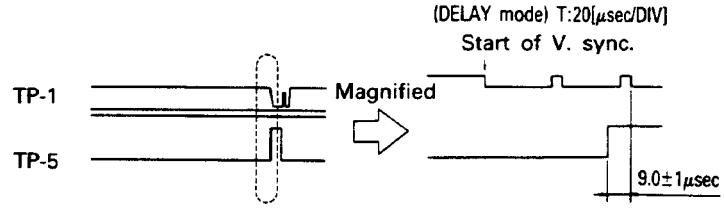
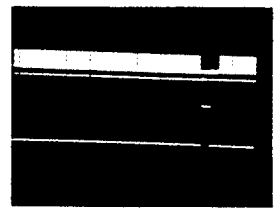
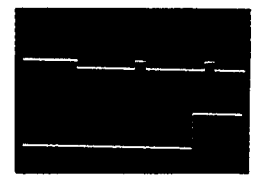
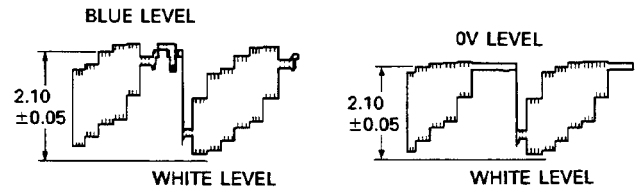
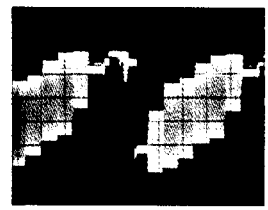
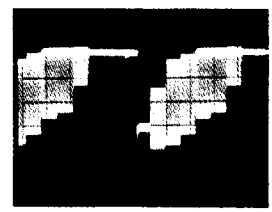
ALIGNMENT PROCEDURE

ADJUSTING ITEM	ADJUSTING POINT	ADJUSTING METHOD
HORIZONTAL PHASE	**VR8005**	1. Set LINES switch S8953 to 625. 2. Feed a Standard colour bar signal to VIDEO input terminal. 3. Connect CH-1 of Dual trace scope to testpoint TP-1. V. scale; 20mV/DIV. (AC coupling) Probe 10:1 Connect CH-2 of Dual trace scope to testpoint TP-6. V. scale; 0.2V/DIV. (DC coupling) H. scale; 10μsec/DIV. Probe 10:1 Sync.; from CH-2 4. Re-adjust VR8005 for 5.2±0.1μsec.  Fig. 3-4-(a) Fig. 3-4-(b)
VERTICAL PHASE	**VR8007**	1. Set LINES switch S8953 to 625. 2. Feed a Standard colour bar signal to VIDEO input terminal. 3. Connect CH-1 of Dual trace scope to testpoint TP-1. V. scale; 50mV/DIV. (AC coupling) Probe 10:1 Connect CH-2 of Dual trace scope to testpoint TP-5. V. scale; 0.2V/DIV. (DC coupling) H. scale; 2msec/DIV. Probe 10:1 Sync.; from CH-2 4. Re-adjust VR8007 for 10.5±1μsec.

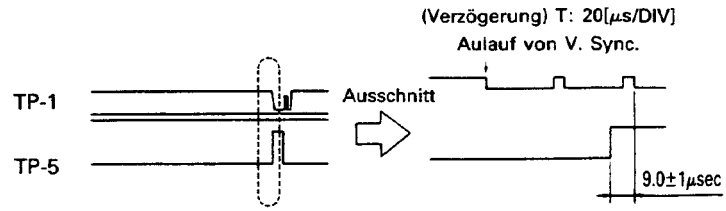
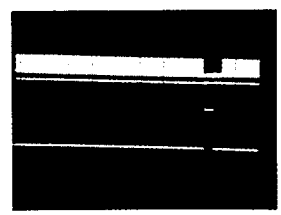
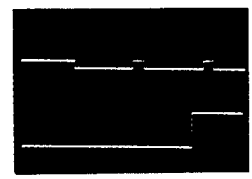
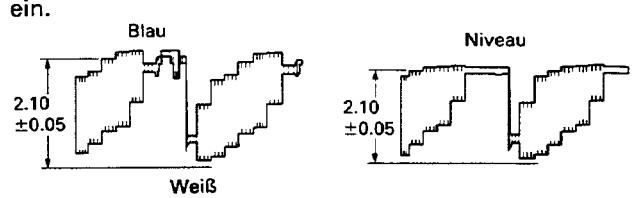
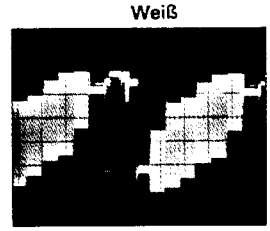
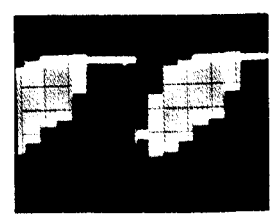
ABGLEICH

Abgleich	Abgleichpunkt	Abgleichmethode
HORIZONTAL-PHASE	**VR8005**	1. Stellen Sie den Zeilenschalter S8953 auf 625. 2. Schließen Sie ein PAL-Farbbalkensignal an die VIDEO IN-Buchse an. 3. Schließen Sie CH-1 eines 2-Kanal Oszillografen an TP-1 an. V. Scale; 20 mV/DIV. (AC-Koppl.) Schließen Sie CH-2 eines 2-Kanal Oszillografen an TP-6 an. V. Scale; 0.2 V/DIV. (DC-Koppl.) H. Scale; 10 μs/DIV. Sync. von CH-2 Tastkopf 10:1 4. Stellen Sie mit VR8005 eine Zeit von 5.2±0.1 μsec ein.   Abb. 3-4-(a)  Abb. 3-4-(b)
VERTIKAL-PHASE	**VR8007**	1. Stellen Sie den Zeilenschalter S8953 auf 625. 2. Schließen Sie ein PAL-Farbbalkensignal an die VIDEO IN-Buchse an. 3. Schließen Sie CH-1 eines 2-Kanal Oszillografen an TP-1 an. V. Scale; 50 mV/DIV. (AC-Koppl.) Schließen Sie CH-2 eines 2-Kanal Oszillografen an TP-5 an. V. Scale; 0.2 V/DIV. (DC-Koppl.) H. Scale; 2 ms/DIV. Sync. von CH-2 Tastkopf 10:1 4. Stellen Sie mit VR8007 eine Zeit von 10.5±1 μsec ein.

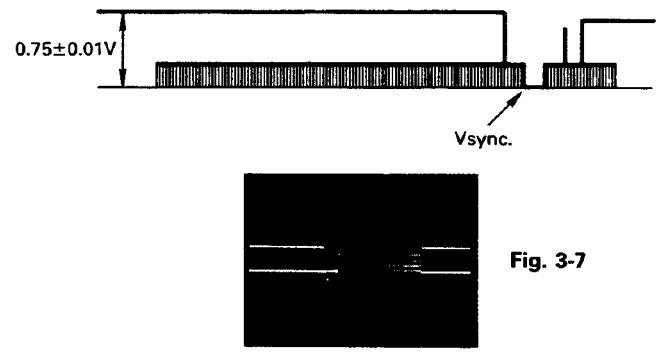
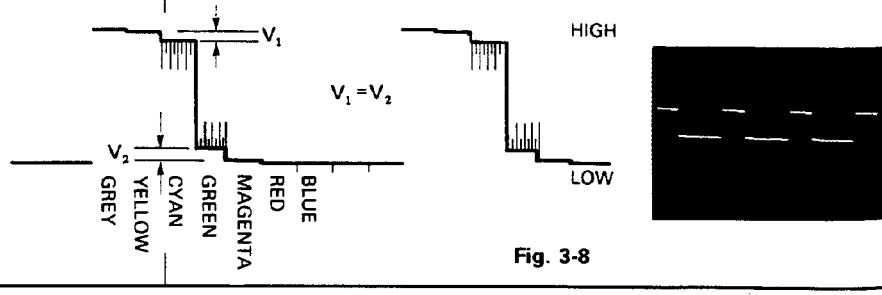
ALIGNMENT PROCEDURE

ADJUSTING ITEM	ADJUSTING POINT	ADJUSTING METHOD
VERTICAL PHASE	**VR8007**	   **Fig. 3-5-(a)** **Fig. 3-5-(b)**
A/D SAMPLING FREQUENCY	**VR8000**	1. Connect a Frequency counter to testpoint TP-9. 2. Re-adjust VR8000 for 11.70MHz±0.05MHz. Note: After warming up (more than 5 minutes)
VIDEO GAIN CLAMP LEVEL	**VR8001** **VR8002**	1. Set LINES switch S8953 to 625. 2. Feed a Standard colour bar signal (80% modulation) to VIDEO input terminal. 3. Connect CH-1 of Dual trace scope to testpoint TP-7. V. scale; 50mV/DIV. (DC coupling) Probe 10:1 Note: If the waveform can not be satisfactorily synchronized then, connect CH-2 to TP-2 (horizontal waveform) and trigger the Dual trace scope from CH-2. 4. Turn VR8002 fully clockwise. 5. Re-adjust VR8001 for 2.10±0.05V. (Fig. 3-6-a)    **Fig. 3-6-(a)** **Fig. 3-6-(b)**

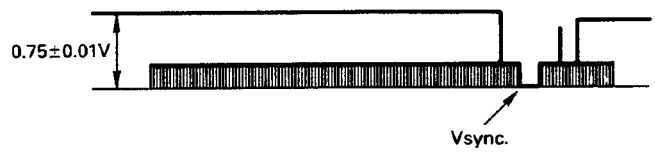
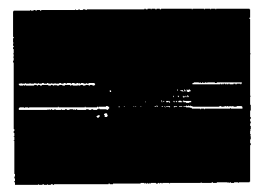
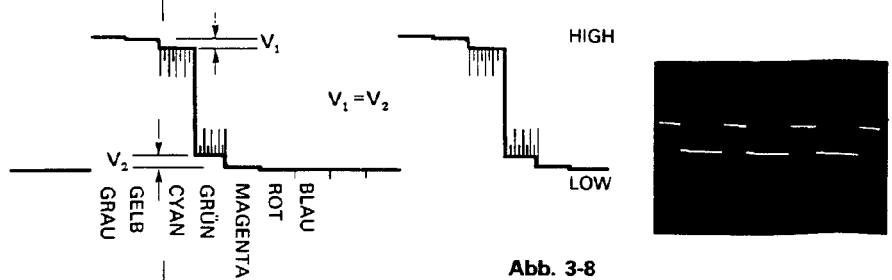
ABGLEICH

Abgleich	Abgleichpunkt	Abgleichmethode
VERTIKAL-PHASE	**VR8007**	   **Abb. 3-5-(a)** **Abb. 3-5-(b)**
A/D SAMPLING FREQUEZ	**VR8000**	1. Schließen Sie einen Frequenzzähler an TP-9 an. 2. Stellen Sie mit VR8000 eine Frequenz von 11.70±0.05 MHz ein.
VIDEO VERSTÄRK KLEMMPEGEL	**VR8001** **VR8002**	1. Stellen Sie den Zeilenschalter S8953 auf 625. 2. Schließen Sie ein PAL-Farbbalkensignal an die VIDEO IN-Buchse an. 3. Schließen Sie CH-1 eines 2-kanal Oszillografen an TP-7 an. V. Scale; 50 mV/DIV. (DC-Koppl.) Tastkopf 10:1 ANMERKUNG: Kann der Oszillograf nicht einwandfrei getriggert werden, ist CH-2 mit dem Signal von TP-2 zu triggern. 4. Drehen sie VR8002 auf Links-anschlag. 5. Stellen Sie mit VR8001 eine Spannung von 2.10 V±0.05 V ein.    **Abb. 3-6-(a)** **Abb. 3-6-(b)**

ALIGNMENT PROCEDURE

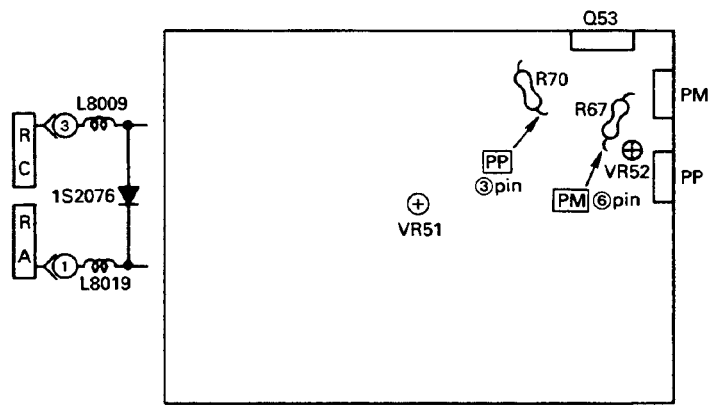
ADJUSTING ITEM	ADJUSTING POINT	ADJUSTING METHOD
		6. Set 0V level displayed on the Dual trace scope to the second graduation line from top. 7. Re-adjust VR8002 for 2.10±0.05V. (Fig. 3-6-b)
AGC gain of video signal	**VR8500**	1. Set LINES switch S8953 to 625, and turn on the AGC (DIP switch). 2. Feed a Standard colour bar signal to VIDEO input terminal. 3. Connect CH-1 of a Dual trace scope to testpoint TP-56. V. scale; 50mV/DIV.(AC coupling) H. scale; 2msec/DIV. Probe 10:1 4. Re-adjust VR8500 for 0.75±0.01V  Fig. 3-7
Binary conversion level of video signal	**VR8501**	* Carry out this adjustment on completion of the video signal AGC gain adjustment. 1. Set the following switches on the rear panel to the specified positions. LINES-SW ... 625 AGC-SW ... ON TRP-SW ... ON CG2-SW ... ON 2. Feed a Standard colour bar signal to VIDEO input terminal. 3. Connect CH-1 of Dual trace scope to testpoint TP-56. V. scale; 50mV/DIV. (AC coupling) H. scale; 20μsec/DIV. Probe 10:1 4. Re-adjust VR8501 so that the grey, yellow, and cyan of the colour bar signal shall be a high level and green and the subsequent colours shall be a low level.  Fig. 3-8

ABGLEICH

Abgleich	Abgleichpunkt	Abgleichmethode
		6. Stellen Sie 0V bei der 2. Abstufung auf dem Oszillografen ein. 7. Stellen Sie mit VR8002 eine Spannung von 2.10 V±0.05 V ein (Abb. 3-6-(b))
AGC Verstärkung des Videosignals	**VR8500**	1. Den Schalter LINES S8953 auf 625 und die AGC einschalten (DIP-Schalter). 2. Ein Farbbalkensignal anschließen. 3. Schließen Sie CH-1 des 2-Kanal Oszillografen an Testpunkt TP-56 an. V. Scale; 50 mV/DIV.(AC-Koppl.) H. Scale; 2 ms/DIV. Tastkopf 10:1 4. Mittels VR8500 eine Spannung von 0,75±0,01 V einstellen.   **Abb. 3-7**
Binärpegel des Videosignals	**VR8501**	* Diesen Abgleich erst dann durchführen, wenn der AGC Abgleich durchgeführt wurde. 1. Folgende Schalter sind in die beschriebenen Positionen zu bringen (Geräterückseite) LINES-SW ... 625 AGC-SW ... ON TRP-SW ... ON CG2-SW ... ON 2. Ein Farbbalkensignal anschließen. 3. CH-1 des 2-Kanal-Oszillografen an TP-56. V. Scale; 50 mV/DIV. (AC-koppl.) H. Scale; 20 μs/DIV. Tastkopf 10:1 4. VR8501 so einstellen, daß Grau, Gelb und Cyan auf der oberen (high) und Grün und die folgenden Farben auf der unteren (low) Ebene liegen.  **Abb. 3-8**

ALIGNMENT PROCEDURE

ADJUSTING ITEM	ADJUSTING POINT	ADJUSTING METHOD
HEAD VOLTAGE	**VR51** **VR52**	1. Set LINES switch S8953 to 525. 2. Connect a diode (1S2076) between L8009 and L8019 (on VIDEO COPY-PCB). Connect L8009 to anode side of the diode 3. Connect a DC voltmeter to connector PM — ⑥ (+). 4. Connect a DC voltmeter to connector PP — ③ (+). Then re-adjust VR51 for 20.5V. 5. Press PRINT button to print 16-steps tone test pattern. Adjust VR52 so that the first tone shall be colour appearing point. (a print will have to be made after each adjustment of the control.) 6. If printing is continued, the tone changes. Repeat printing several times and be sure that 16-steps tone conforms to the specification.



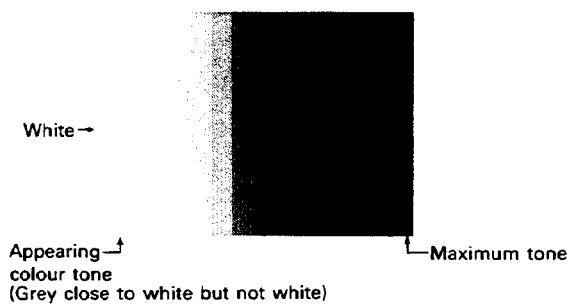
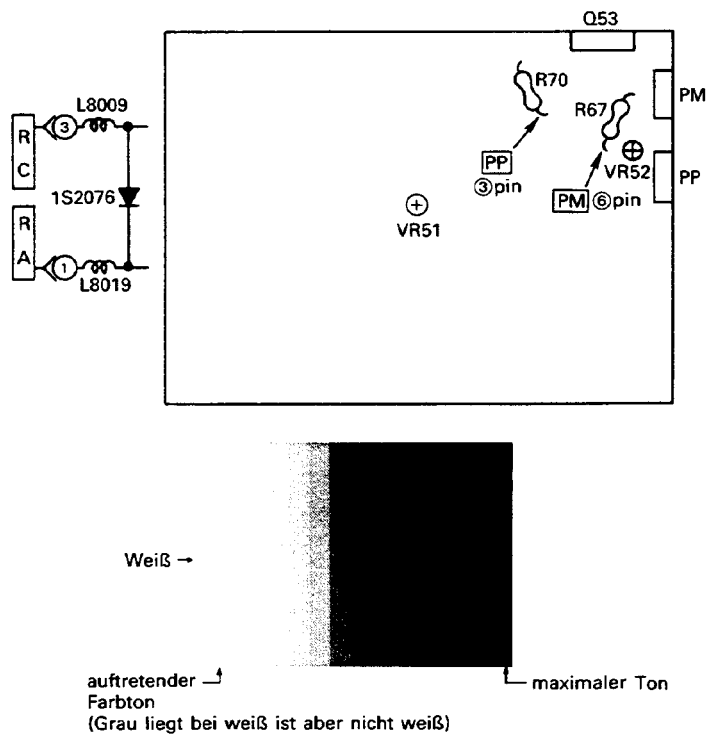


Fig. 3-8

7. Re-adjust VR51 to satisfy the following condition.
   The printing voltage at connector PM — ⑥ is 17±1.5V.
   The stand by voltage at connector PP — ③ is 19±1.5V.
   Note: The voltage at PP — ③ is the standby voltage and it should be adjusted accurately to the value of PM — ⑥ voltage plus 2.0 volts.
   If it exceeds 2.0 volts, Q53 may be damaged.

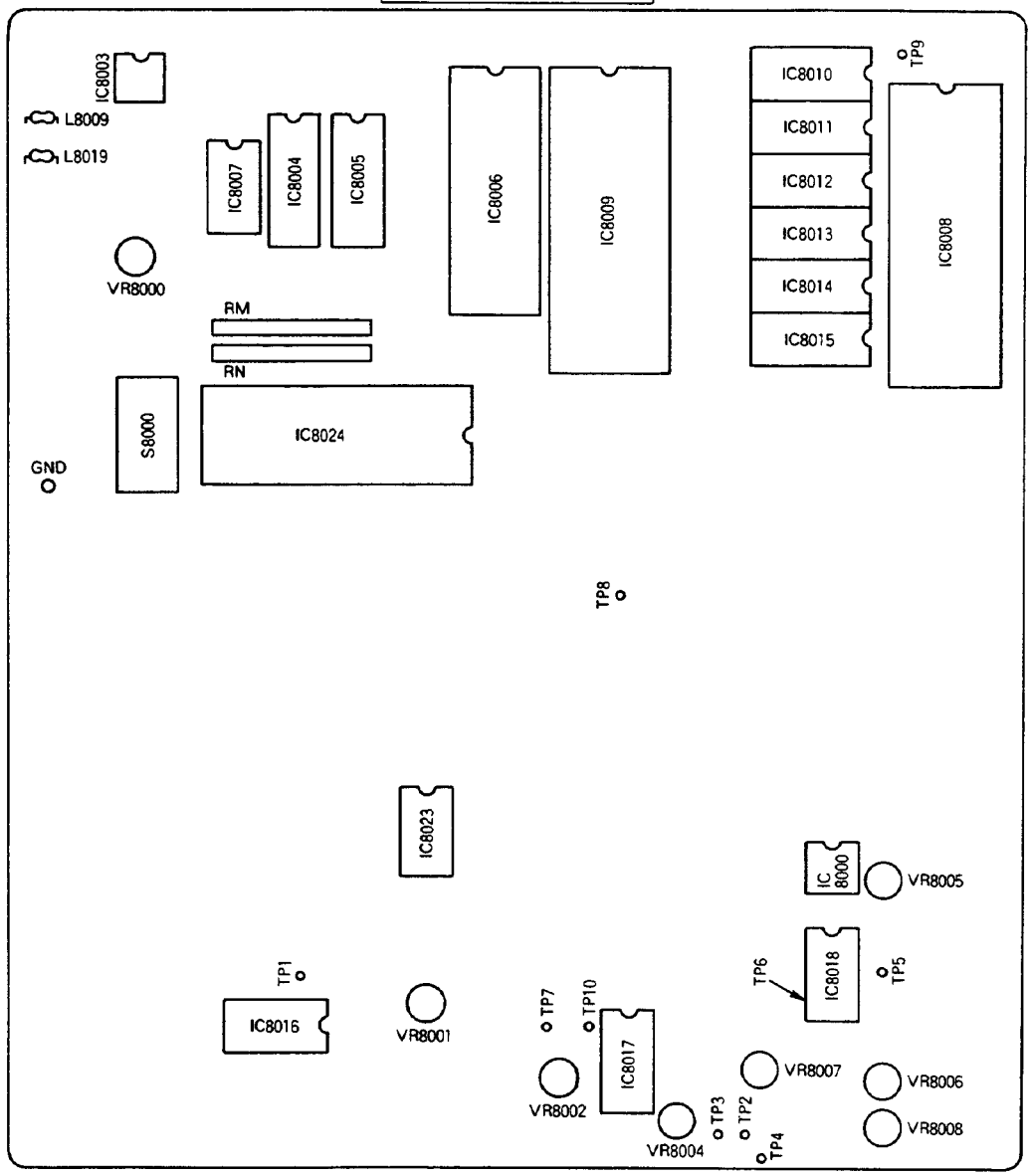
ABGLEICH

Abgleich	Abgleichpunkt	Abgleichmethode
KOPF-SPANNUNG	**VR51** **VR52**	1. Stellen Sie den Zeilenschalter S8953 auf 525. 2. Schließen Sie eine Diode (1S2076) zwischen L 8009 und L 8019 auf der Video Copy. Platine an (Anode an L 8009) (Abb 2.6). 3. Schließen Sie ein DC-Volt-meter an PM-6 (+) an. 4. Schließen Sie ein DC-Volt-meter an PP-3 (+) an. Stellen Sie mit VR 51 20.5 V ein (Betriebsart Bereitschaft). 5. Drücken Sie die Print-Taste, und drucken Sie eine 16-fache Farbtreppe ab. Stellen Sie VR 52 so ein, daß der erste Balken farbig erscheint. (Nach jeder Einstellung ist ein Druck zu wiederholen). 6. Ändert sich die Farbabstufung während eines Druckes, so sind mehrere Druckvorgänge zu wiederholen, bis die 16-fache Farbtreppe den Spezifizierungen entspricht (Abb. 3-8).  **Abb. 3-8** 7. Stellen Sie VR 51 so ein, daß die folgenden Bedingungen erfüllt sind: DC Voltmeter an PM-6 beträgt 17±1,5 V (beim Drucken). DC Voltmeter an PP-3 beträgt 19±1,5 V.

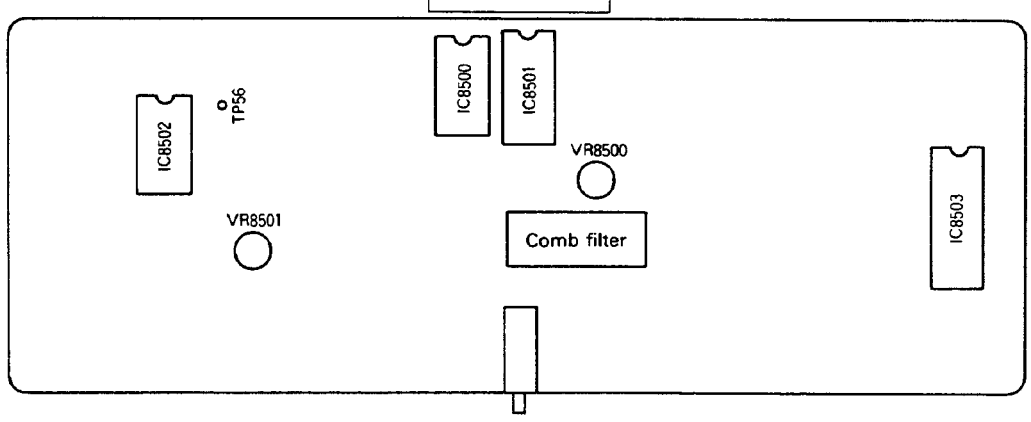
ALIGNMENT PROCEDURE

ADJUSTING POINT

Video Copy PCB



Video PCB



PARTS LIST

In order to expedite delivery of replacement part orders,
Specify: 1. Model number/Serial number
2. Part number and Description
3. Quantity
Unless full information is supplied, delay in execution of orders will result.

Um Ersatzteilbestellungen exakt und schnell auszuführen sind folgende Daten erforderlich.
Spezifizieren: 1. Modell Typ
2. Ersatzteilnummer und Name
3. Bestellmenge

RESISTOR
WIDERSTÄNDE

MARK MARKE	TOLERANCE TOLERANZ
J	±5%
K	±10%
M	±20%
N	±30%

CAPACITOR
KONDENSATOREN

MARK MARKE	TOLERANCE TOLERANZ	MARK MARKE	TOLERANCE TOLERANZ
J	±5%	Z	+80% −20%
K	±10%	C	±0.25pF
M	±20%	D	±0.5pF
P	+100% −0%	F	±1pF

SYMBOL NO. SYMBOL NR.	PART NO. TEILE NR.	PART NAME TEILE NAME	DESCRIPTION BESCHREIBUNG
		IC's	
IC01	266D06501	STK7408B	MAIN SW REG
IC51	266D06506	AN78N06	−6V REG
IC52	266D06503	TL431CLPB	3.5V zener
IC53	266D06504	STR2012	12V SW REG
IC54	266D06505	STR2005	5V SW REG
IC8000	266P15409	μPC393C/LM393N/ TDB0193DP/NJM2901D	PAPER DETECTION/ H.DELAY COMPARATOR
IC8001	266P09009	SN74LS273N/HD74-LS273P/M74LS273P	ADDRESS LATCH
IC8002	272P09702	HN27128AG-M02	128K ROM
IC8003	266P71901	M51841P/NE555V	TEMPERATURE DETECTION
IC8004	266P47309	SN74LS244N/HD74-LS244P/M74LS244P	HEAD DRIVE
IC8005	266P47309	SN74LS244N/HD74-LS244P/M74LS244P	HEAD DRIVE
IC8006	266P40801	M60004-0201SP	GATE ARRAY-1
IC8007	266P64701	SN74S132N	CLOCK OSC
IC8008	266P41001	M60007-0211SP	GATE ARRAY-2
IC8009	266P40901	M60007-0210SP	GATE ARRAY-3
IC8010	266P40703	μPD41464C-15	256K D-RAM PORTRAIT MEMORY-1
IC8011	266P40703	μPD41464C-15	PORTRAIT MEMORY-2
IC8012	266P40703	μPD41464C-15	PORTRAIT MEMORY-3
IC8013	266P40703	μPD41464C-15	PORTRAIT MEMORY-4
IC8014	266P40703	μPD41464C-15	PORTRAIT MEMORY-5
IC8015	266P40703	μPD41464C-15	PORTRAIT MEMORY-6
IC8016	263P05209	TC4052BP/MC140-52BCP/HD14052B	INPUT SELECTOR
IC8017	266P50201	LA7800	SYNC SEP.
IC8018	266P80601	M53206P/SN7406N	SYNC-SIGNAL BUFFER
IC8019	266P41201	AN6855	A/D CONVERTER
IC8020	266P49509	SN74LS374N/HD74-LS374P/M74LS374P	PARALLEL DATA BUFFER
IC8021	266P47809	SN74LS86N/HD74-LS86P/M74LS86P	RGB INTERFACE-1
IC8022	266P47809	SN74LS86N/HD74-LS86P/M74LS86P	RGB INTERFACE-2
IC8023	266P84001	SN74LS00N/HD74LS00P	D/A CONVERTER
IC8024	272P14101	M5M8050H-145P	MICRO COMPUTER
IC8025	266P84902	SN74LS74AN/ HD74LS74AP	1/2, 1/4 DIVIDER

SYMBOL NO. SYMBOL NR.	PART NO. TEILE NR.	PART NAME TEILE NAME	DESCRIPTION BESCHREIBUNG
IC8026	266P84001	SN74LS00N/ HD74LS00P	MEMORY FIELD SELECTOR-3
IC8027	263P30002	TC74HC00P	RGB-TTL 2 GRADATION-1
IC8028	266P85001	SN74LS04N/ HD74LS04P	MEMORY FIELD SELECTOR-2
IC8029	266P87802	SN74LS32N/ HD74LS32P	RGB-TTL 2 GRADATION-2
IC8030	266P84802	SN74LS02N/ HD74LS02P	
IC8031	263P37402	TC74HC74P	MEMORY FIELD SELECTOR-1
IC8500	263P06602	TC4066BP	
IC8501	263P05209	TC4052BP/ MC14052BCP	SIGNAL-SELECTOR
IC8502	263P01102	TC4011BP	QUAD 2 INPUT NAND GATE
IC8503	266P47301	SN74LS244N	INVERTED 3 STATE OUTPUTS
		TRANSISTORS	
Q51	260P33804	2SC2603-E,F	MAIN ERROR DETECTOR
Q53	261D01601	2SB883	+17V OUT
Q54	260P33804	2SC2603-E,F	+17V DRIVE
Q55	260P33804	2SC2603-E,F	+17V RESET-2
Q57	261D02304	2SD1661M	+17V RESET-3
Q58	260P16607	2SA673-C,D	POWER RESET-1
Q59	260P33804	2SC2603-E,F	POWER RESET-2
Q60	260P33804	2SC2603-E,F	+17V RESET-1
Q8000	260P33804	2SC2603-E,F	RESET-1
Q8001	260P33804	2SC2603-E,F	RESET-2
Q8002	260P33804	2SC2603-E,F	RESET-3
Q8003	260P33804	2SC2603-E,F	HEAD POWER DRIVE
Q8004	260P41904	2SC2724-C,D	VIDEO INPUT BUFFER-2
Q8005	260P41904	2SC2724-C,D	D/A CONVERTER-1
Q8006	260P41904	2SC2724-C,D	D/A CONVERTER-2
Q8007	260P41904	2SC2724-C,D	D/A CONVERTER-3
Q8008	260P41904	2SC2724-C,D	D/A CONVERTER-4
Q8009	260P41904	2SC2724-C,D	D/A CONVERTER-5
Q8010	260P38701	2SC2236-O,Y	D/A CONVERTER-6
Q8011	260P41904	2SC2724-C,D	VIDEO INPUT BUFFER-1

SYMBOL NO. SYMBOL NR.	PART NO. TEILE NR.	PART NAME TEILE NAME	DESCRIPTION BESCHREIBUNG
		TRANSISTORS	
Q8014	260P41904	2SC2724-C,D	VIDEO AMP-1
Q8015	260P41904	2SC2724-C,D	VIDEO AMP-2
Q8016	260P41904	2SC2724-C,D	VIDEO AMP-3
Q8017	260P25601	2SA1115-E,F	VIDEO CLAMP
Q8018	260P41904	2SC2724-C,D	SLICE-1
Q8019	260P25601	2SA1115-E,F	SLICE-2
Q8020	260P25601	2SA1115-E,F	SLICE-3
Q8021	260P41904	2SC2724-C,D	SLICE-4
Q8022	260P41904	2SC2724-C,D	SYNC SIGNAL BUFFER
Q8023	260P41904	2SC2724-C,D	VIDEO CLAMP DRIVE
Q8024	260P25601	2SA1115-E,F	V.HOLD SW
Q8025	260P25601	2SA1115-E,F	REFERENCE VOLTAGE-2
Q8026	260P33804	2SC2603-E,F	REFERENCE VOLTAGE-1
Q8027	260P49001	2SD1153	MOTOR DRIVE-5
Q8028	260P49001	2SD1153	MOTOR DRIVE-6
Q8029	260P25601	2SA1115-E,F	MOTOR DRIVE-1
Q8030	260P25601	2SA1115-E,F	MOTOR DRIVE-2
Q8031	260P25601	2SA1115-E,F	MOTOR DRIVE-3
Q8032	260P49001	2SD1153	MOTOR DRIVE-7
Q8033	260P25601	2SA1115-E,F	MOTOR DRIVE-4
Q8034	260P49001	2SD1153	MOTOR DRIVE-8
Q8035	260P41904	2SC2724-C,D	DITHER DRIVE-1
Q8036	260P41904	2SC2724-C,D	DITHER DRIVE-2
Q8037	260P33804	2SC2603-E,F	H.DELAY DRIVE
Q8038	260P33804	2SC2603-E,F	PAPER DETECTION-1
Q8039	260P33804	2SC2603-E,F	
Q8040	260P45501	DTC124F	PAPER DETECTION-2
Q8500	260P29801	2SC1583-F	AGC AMP-1
Q8501	260P29801	2SC1583-F	AGC AMP-2
Q8502	260P41904	2SC2724-C,D	AGC AMP-3
Q8503	260P41904	2SC2724-C,D	AGC AMP-4
Q8504	260P25601	2SA1115-E,F	AGC OUTPUT
Q8505	260P25601	2SA1115-E,F	PEDESTAL CLAMP-1
Q8506	260P25601	2SA1115-E,F	PEDESTAL CLAMP-2
Q8508	260P41904	2SC2724-C,D	PEAK DETECTION
Q8509	260P41904	2SC2724-C,D	PEAK HOLD
Q8510	260P41904	2SC2724-C,D	INPUT BUFFER
Q8511	260P41904	2SC2724-C,D	TRAP BUFFER
Q8512	260P41904	2SC2724-C,D	NTSC TRAP OUTPUT
Q8513	260P41904	2SC2724-C,D	PAL TRAP OUTPUT
Q8514	260P41904	2SC2724-C,D	COMB FILTER OUTPUT
Q8515	260P41904	2SC2724-C,D	COMPARATOR BUFFER
Q8516	260P41904	2SC2724-C,D	PEDESTAL CLAMP-3
Q8517	260P29801	2SC1583-F	COMPARATOR
Q8518	260P41904	2SC2724-C,D	COMPARATOR OUTPUT
Q8519	260P29801	2SC1583-F	SHARPNESS-2
Q8521	260P41904	2SC2724-C,D	SHARPNESS-1
Q8522	260P41904	2SC2724-C,D	SHARPNESS OUTPUT
Q8523	260P45401	DTA124F	REMOTE SW-1
Q8524	260P45501	DTC124F	REMOTE SW-2
Q8525	260P45401	DTA124F	INVERTER
Q8900	260P45501	DTC124F	REMOTE AMP-2
Q8901	260P45401	DTA124F	REMOTE AMP-1
		DIODES	
D01	264P23101	TVR1G	
D02	264D10001	RU3B	
D03	264D07303	HZ6A-1	6V zener
D51	264D09409	1SS81	
D52	264D09409	1SS81	
D53	264D10002	ESAC92-M02	
D54	264D10003	HZ7B1L	7V zener
D56	264D10004	HZ6B-2	6V zener
D57	264D10005	HZ20-3	20V zener
D58	264P04504	1S2471	
D59	264P09306	HZ7B2	7V zener
D60	264P04504	1S2471	
D62	264P28501	S5500-D	
D64	264D10004	HZ6B-2	6V zener
D67	264P04504	1S2471	
D901	264D10804	RBV406	
D8003	264P34005	HZ4ALL	
D8004	264P04504	1S2471	
D8005	264P04504	1S2471	
D8012	264P04504	1S2471	
D8013	264P04504	1S2471	
D8018	264P04504	1S2471	
D8019	264P04504	1S2471	
D8020	264P04504	1S2471	
D8023	264P28501	S5500-D	
D8024	264P28501	S5500-D	
D8025	264P28501	S5500-D	
D8026	264P28501	S5500-D	
D8028	264P28501	S5500-D	
D8029	264P28501	S5500-D	
D8030	264P28501	S5500-D	
D8031	264P28501	S5500-D	
D8040	264P04504	1S2471	
D8041	264P04504	1S2471	
D8042	264P46001	EQA02-05AB	5V ZENER

SYMBOL NO. SYMBOL NR.	PART NO. TEILE NR.	PART NAME TEILE NAME	DESCRIPTION BESCHREIBUNG
DIODES			
D8500	264P46504	EQA02-12AB	12V ZENER
D8501	264P04504	1S2471	
D8502	264P04504	1S2471	
D8503	264P04504	1S2471	
D8504	264P04504	1S2471	
D8505	264P04504	1S2471	
D8900	264P35002	SLB-22MG5	STAND-BY IND.
D8901	264P35002	SLB-22MG5	POWER IND.
D8910	264P04504	1S2471	PCB-SW-P
D8911	264P04504	1S2471	PCB-SW-P
D8950	264P04504	1S2471	
D8951	264P04504	1S2471	
D8952	264P04504	1S2471	
D8953	264P04504	1S2471	
D8954	264P04504	1S2471	
D8955	264P04504	1S2471	
D8957	264P04504	1S2471	
D8910 (D8920)	264P46505	EQA02-12A/ RD13EB1	PCB-LED-P
D8911 (D8921)	264P46505	EQA02-12A/ RD13EB1	PCB-LED-P
COILS			
L01	325D08101	Peaking	4.7μH-K
L02	325D08101	Peaking	4.7μH-K
L51	325D08104	Peaking	220μH-K
L52	321D03801	Choke	OL2221-221K2R8
L53	321D03802	Choke	TSL1617-391KR2
L54	321D03802	Choke	TSL1617-391KR2
L55	325D08103	Peaking	1.0μH-M
L901	351P03702	Line filter	ELF-18D607
L8000	325C12101	Peaking	6.8μH-K
L8001	325C12101	Peaking	6.8μH-K
L8002	325C12101	Peaking	6.8μH-K
L8003	325C12101	Peaking	6.8μH-K
L8004	325C12101	Peaking	6.8μH-K
L8005	325C12101	Peaking	6.8μH-K
L8006	325C12101	Peaking	6.8μH-K
L8007	325C12101	Peaking	6.8μH-K
L8008	325C12101	Peaking	6.8μH-K
L8009	325C12101	Peaking	6.8μH-K
L8010	325C12101	Peaking	6.8μH-K
L8011	325C12101	Peaking	6.8μH-K
L8012	325C12101	Peaking	6.8μH-K
L8013	325C12101	Peaking	6.8μH-K
L8014	325C12101	Peaking	6.8μH-K
L8015	325C12101	Peaking	6.8μH-K
L8016	325C12101	Peaking	6.8μH-K

SYMBOL NO. SYMBOL NR.	PART NO. TEILE NR.	PART NAME TEILE NAME	DESCRIPTION BESCHREIBUNG
L8017	325C12101	Peaking	6.8μH-K
L8018	325C12101	Peaking	6.8μH-K
L8019	325C12101	Peaking	6.8μH-K
L8020	325C12101	Peaking	6.8μH-K
L8021	325C12101	Peaking	6.8μH-K
L8022	325C12101	Peaking	6.8μH-K
L8023	325C12101	Peaking	6.8μH-K
L8024	325C12101	Peaking	6.8μH-K
L8025	325C12101	Peaking	6.8μH-K
L8026	325C12101	Peaking	6.8μH-K
L8027	325C12101	Peaking	6.8μH-M
L8029	325C12007	Peaking	3.3μH-K
L8030	325C12007	Peaking	3.3μH-K
L8031	325C12007	Peaking	3.3μH-K
L8032	325C12007	Peaking	3.3μH-K
L8033	325C12007	Peaking	3.3μH-K
L8034	325C12007	Peaking	3.3μH-K
L8035	325C12007	Peaking	3.3μH-K
L8036	325C12007	Peaking	3.3μH-K
L8037	325C12007	Peaking	3.3μH-K
L8038	321D01901	RF	0.47μH-K
L8039	321D01901	RF	0.47μH-K
L8040	325C12007	Peaking	3.3μH-K
L8041	325C12007	Peaking	3.3μH-K
L8042	325C12007	Peaking	3.3μH-K
L8043	325C12007	Peaking	3.3μH-K
L8044	325C12007	Peaking	3.3μH-K
L8045	321D01901	RF	0.47μH-K
L8046	321D01901	RF	0.47μH-K
L8047	321D01901	RF	0.47μH-K
L8048	321D01901	RF	0.47μH-K
L8050	321D01901	RF	0.47μH-K
L8051	321D01901	RF	0.47μH-K
L8052	321D01901	RF	0.47μH-K
L8053	321D01901	RF	0.47μH-K
L8054	321D01901	RF	0.47μH-K
L8055	321D01901	RF	0.47μH-K
L8056	321D01901	RF	0.47μH-K
L8057	325C12101	Peaking	6.8μH-K
L8058	325C12101	Peaking	6.8μH-K
L8085	325C12405	Peaking	0.33μH-M
L8086	325C12103	Peaking	10μH-K
L8087	325C12103	Peaking	10μH-K
L8088	325C12101	Peaking	6.8μH-K
L8096	411D00901	Ferrite core	
L8100	325C12007	Peaking	3.3μH-K
L8101	325C12007	Peaking	3.3μH-K
L8102	325C12007	Peaking	3.3μH-K
L8103	321C03109	RF	33μH-K
L8500	325C11107	Peaking	22μH-K

SYMBOL NO. SYMBOL NR.	PART NO. TEILE NR.	PART NAME TEILE NAME	DESCRIPTION BESCHREIBUNG
COILS			
L8501	349P06402	TraP	3.58MHz (NTSC)
L8502	320P02201	TraP	4.43MHz (PAL)
L8503	325C11107	Peaking	22μH-K
L8504	325C11200	Peaking	39μH-K
L8505	325C11107	Peaking	22μH-K
L8506	325C12101	Peaking	6.8μH-K
L8507	325C12101	Peaking	6.8μH-K
L8508	325C12101	Peaking	6.8μH-K
L8509	325C12101	Peaking	6.8μH-K
L8510	325C12101	Peaking	6.8μH-K
L8520	325C12005	Peaking	2.2μH-K
L8521	325C12005	Peaking	2.2μH-K
L8522	325C12005	Peaking	2.2μH-K
L8523	325C12005	Peaking	2.2μH-K
L8524	325C12005	Peaking	2.2μH-K
L8525	325C12005	Peaking	2.2μH-K
L8526	325C12005	Peaking	2.2μH-K
L8527	325C12005	Peaking	2.2μH-K
L8528	325C12005	Peaking	2.2μH-K
L8529	325C12005	Peaking	2.2μH-K
L8530	325C12005	Peaking	2.2μH-K
L8531	325C12005	Peaking	2.2μH-K
L8532	325C12005	Peaking	2.2μH-K
L8540	325C12001	Peaking	1.0μH-K
L8541	325C12001	Peaking	1.0μH-K
L8542	325C12001	Peaking	1.0μH-K
L8543	325C12001	Peaking	1.0μH-K
L8544	325C12001	Peaking	1.0μH-K
L8545	325C12001	Peaking	1.0μH-K
L8546	325C12001	Peaking	1.0μH-K
L8547	325C12001	Peaking	1.0μH-K
L8550	325C12005	Peaking	2.2μH-K
L8551	325C12005	Peaking	2.2μH-K
L8552	325C12005	Peaking	2.2μH-K
L8553	325C12005	Peaking	2.2μH-K
L8554	325C12005	Peaking	2.2μH-K
L8555	325C12005	Peaking	2.2μH-K
L8556	325C12005	Peaking	2.2μH-K
DL8500	337P09601	Delay line	ADL-CX
RESISTORS & CAPACITORS			
R04	109D09301	Fusible	2W 3K ohm-J
R06	109D09302	Fusible	1/4W 2.2K ohm-J
R09	109D09303	Fusible	1/4W 3.9 ohm-J
R52	109D09304	Fusible	1W 10 ohm-J
R67	103D09304	Fusible	1W 10 ohm-J

SYMBOL NO. SYMBOL NR.	PART NO. TEILE NR.	PART NAME TEILE NAME	DESCRIPTION BESCHREIBUNG
R8013	103P56307	Network	1/8W 10K ohm-J×6
R8024	103P58303	Network	1/8W 4.7K ohm-J×8
R8032	103P58303	Network	1/8W 4.7K ohm-J×8
R8039	103P56205	Network	1/8W 1K ohm-J×6
R8045	103P54204	Network	1/8W 820 ohm-J×4
R8106	103P58303	Network	1/8W 4.7K ohm-J×8
R8121	109P06009	Network	1/8W 15K ohm-J×4
R8122	103P54303	Network	1/8W 4.7K ohm-J×4
R8123	109P06008	Network	1/8W 1.5K ohm-J×4
R8124	103P54302	Network	1/8W 3.9K ohm-J×4
R8138	103P58307	Network	1/8W 10K ohm-J×8
R902	109D08703	Composition	1/2W 470K ohm-K
RN8500	103P54405	Network	1/8W 47K ohm-J×4
RN8501	103P58307	Network	1/8W 10K ohm-J×8
C901		MP	AC 250V
C902		MP	AC 250V
C905	142D00101	Ceramic	AC 125V 2200pF
C906	142D00101	Ceramic	AC 125V 2200pF
C907	142D00101	Ceramic	AC 125V 2200pF
C911	181D00103	Electrolytic	200V 470μF
C912	181D00103	Electrolytic	200V 470μF
C903		Ceramic	AC 250V 4700pF
C904		Ceramic	AC 250V 4700pF
C908		Ceramic	AC 250V 4700pF
C909		Ceramic	AC 250V 4700pF
C910		Ceramic	AC 250V 4700pF
C913		Ceramic	AC 250V 4700pF
VARIABLE RESISTORS			
VR01	129D12801	Semifixed	B-50K ohm (MAIN SW REG.)
VR51	129D12802	Semifixed	B-2K ohm (+17V ADJ.)
VR52	129D12802	Semifixed	B-2K ohm (+17V ADJ.)
VR8000	127C08003	Semifixed	1/10W B-500 ohm-M (SAMPLING COLCK)
VR8001	127C08004	Semifixed	1/10W B-1K ohm-M (VIDEO GAIN)
VR8002	127C08003	Semifixed	1/10W B-500 ohm-M
VR8004	127C08007	Semifixed	1/10W B-5K ohm-M (H.HOLD)
VR8005	127C08008	Semifixed	1/10W B-10K ohm-M (H.PHASE)
VR8006	127C08104	Semifixed	1/10W B-300K ohm-M (V.HOLD-2)
VR8007	127C08100	Semifixed	1/10W B-30K ohm-M (V. PHASE)

SYMBOL NO. SYMBOL NR.	PART NO. TEILE NR.	PART NAME TEILE NAME	DESCRIPTION BESCHREIBUNG
VARIABLE RESISTORS			
VR8008	127C08009	Semifixed	1/10W B-20K ohm-M (V.HOLD-1)
VR8500	127C08007	Semifixed	1/5W B-5K ohm-M (AGC GAIN)
VR8501	127C08007	Semifixed	1/5W B-5K ohm-M (THRES HOLD LEVEL)
VR8950	120C35504	PCB	1/20W B-1K ohm (VIDEO LEVEL)
VR8951	120C35602	PCB	1/20W B-10K ohm (SHARPNESS)
PRINTED CIRCUIT BOARD			
	930B23103	Video copy-PCB	
	939P17605	Power-PCB unit	
	920D08201	Terminal-PCB	
	930C10402	Switch-P-PCB	
	930C19704	LED-P-PCB	
	930C17602	Video-PCB	
MISCELLANEOUS			
T01		Power transformer	
PC01	268D00402	Photo coupler	TLP580
PC02	268D00402	Photo coupler	TLP580
S01	264D07801	Thyristor	TN-41A
K901	287D02305	Power relay	LZ-9HME-UL3
F902	283D05805	Fuse (Delay type)	250V, T2A
CF8000	299P04801	Ceramic oscillator	KBR-11.0M
S901	432P05301	Push switch	(POWER ON/OFF)
S8000	431C06101	Slide switch	(PAPER SENSITIVITY)
S8900	432P10101	key board switch	(PRINT)
S8901	432P10101	key board switch	(COPY)
S8910	432P07201	Push switch	(P-FEED, PRINT, SCAN)
S8911	432P07301	Push switch	(CONTRAST)
S8950	431C06803	Slide switch	(CENTRO/ COMPOSITE/TTL)
S8951	431C06701	Slide switch	(NORMAL/SUPER)
S8952	431C06701	Slide switch	(FIELD/FRAME)
S8953	431C06701	Slide switch	(525/625)
S8954	431C06701	Slide switch	(75 ohm/HIGH)
S8955	431C06101	Slide switch	
	449P01309	IC socket 28pins	IC8002
J8900	451C02701	Remote jack	
	452C04001	Connector 36pins	(PARALLEL DATA IN)
	452D10601	BNC connector	(VIDEO IN)
	452D10601	BNC connector	(VIDEO OUT)
J8002	452C03901	DSUB connector	(TTL IN)

SYMBOL NO. SYMBOL NR.	PART NO. TEILE NR.	PART NAME TEILE NAME	DESCRIPTION BESCHREIBUNG
J8003	452C03901	DSUB connector	(TTL OUT)
	242C89701	AC power cord	P61B only
	242C79509	AC power cord	P61E only
	939P13403	Video copy assembly	
	939P14103	Remote controller	
	460D01001	Thermal head	
	621D26201	Gear-A	
	621D26202	Gear-B	
	621D26203	Gear-C	
	621D26204	Gear-D	
	621D26205	Gear-E	
	685D02301	E-Ring	
	621D26301	Bush	
	940D06201	Platen assembly	
	288D01701	Step motor	
	299D14501	Sensor assembly	(Paper, Temperature)
	299D14701	Humidity sensor	
	531D19401	Shaft assembly	
	641D83901	Shaft holder	
	452C03601	BNC connector	BNC/RCAJACK
	242D23201	BNC cable	BNC/BNC
	621D25901	DSUB connector cover	
	621D26001	36pins connectro cover	
	451D04601	POWER JACK-3P	
J8004	451C08401	Remote jack	
COSMETIC PARTS			
	710A03206	Cabinet	
	701A38102	Front panel	P61B only
	701A38108	Front panel	P61E only
	702C66506	Door	
	761C27801	Cutter panel	
	704C37007	Power button	(POWER ON/OFF)
	704C37008	Push button	(COPY, PRINT)
	734D09601	Rever button	
	734D08206	Switch button	(CONTRAST, FEED, POSI/NEGA, DIRECTION)
	771D05101	Foot	

SYMBOL NO. SYMBOL NR.	PART NO. TEILE NR.	PART NAME TEILE NAME	DESCRIPTION BESCHREIBUNG
		PACKING PARTS	
	802C73803	Packing case	P61E only
	802C73802	Packing case	P61B only
	803B39001	Cushion	
	803C25101	Cushion	
	831D16901	Packing bag	Thermal paper
	831D18301	Packing bag	Accessory
	831D19901	Packing bag	VCP
	871C25500	Instruction book	P61E only
	871C25409	Instruction book	P61B only
		PAPER REFILL	
	859P00506	Thermal paper	1 Roll (K60S)
	859P00701	Thermal paper	1 Roll (K60N)
	859P01306	Thermal paper	1 Roll (K61S)

PARTS ADDRESS : PCB-TERMINAL

SYMBOL NO.	ADDRESS	SYMBOL NO.	ADDRESS	SYMBOL NO.	ADDRESS	SYMBOL NO.	ADDRESS	SYMBOL NO.	ADDRESS	SYMBOL NO.	ADDRESS
D8950	A-2	D8953	A-2	D8956	B-1	VR8950	B-1	S8950	A-2	S8953	A-1
D8951	A-2	D8954	A-2	D8957	A-2	VR8951	A-3	S8951	A-2	S8954	B-1
D8952	A-2	D8955	B-1					S8952	A-1	S8955	A-2

PARTS ADDRESS : PCB-POWER

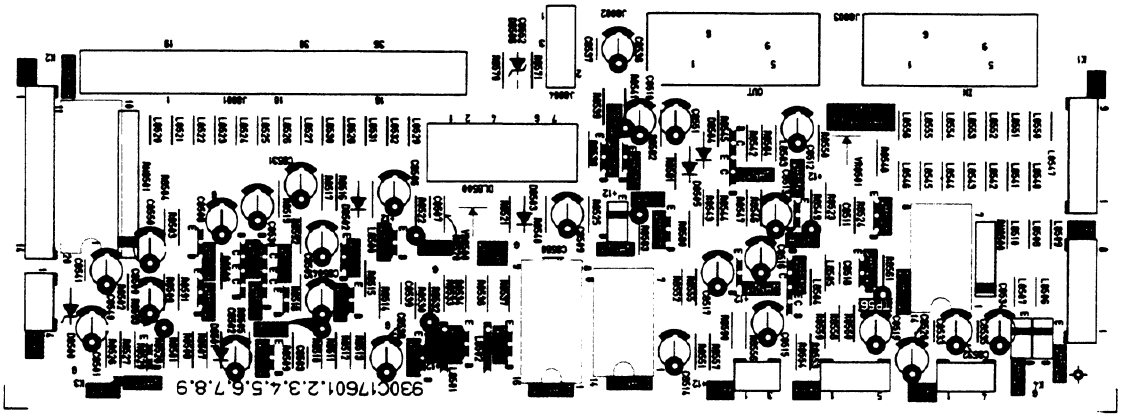
SYMBOL NO.	ADDRESS	SYMBOL NO.	ADDRESS	SYMBOL NO.	ADDRESS	SYMBOL NO.	ADDRESS	SYMBOL NO.	ADDRESS	SYMBOL NO.	ADDRESS
IC01	B-4	Q60	B-2	D59	A-2	L54	A-2	C902	C-2	VR01	B-4
IC51	A-2			D60	A-2	L55	B-1	C903	C-2	VR51	B-3
IC52	A-1	D01	B-4	D62	B-2	L901	C-2	C904	C-2	VR52	A-1
IC53	A-1	D02	A-4	D64	B-2			C905	C-2		
IC54	A-2	D03	B-4	D67	A-1	R04	B-4	C906	C-2	T01	A-3
		D51	A-3	D901	C-3	R06	B-4	C907	C-2	PC01	B-3
Q51	B-3	D52	A-3			R09	B-4	C908	C-2	PC02	B-3
Q53	A-1	D53	A-3	L01	A-4	R52	A-2	C909	C-2		
Q54	B-1	D54	B-2	L02	A-4	R67	A-1	C910	C-4	S01	B-4
Q55	A-2	D56	A-1	L51	B-3	R902	C-1	C911	C-3	K901	B-2
Q57	A-2	D57	A-1	L52	A-2			C912	C-4	F901	B-1
Q58	B-2	D58	A-2	L53	B-1	C901	C-1	C913	C-4		

PARTS ADDRESS : PCB-VIDEO

SYMBOL NO.	ADDRESS	SYMBOL NO.	ADDRESS	SYMBOL NO.	ADDRESS	SYMBOL NO.	ADDRESS	SYMBOL NO.	ADDRESS	SYMBOL NO.	ADDRESS
IC8500	B-3	Q8510	B-1	Q8525	A-3	L8505	B-3	L8528	A-2	L8551	A-4
IC8501	B-2	Q8511	B-2			L8506	B-4	L8529	A-2	L8552	A-4
IC8502	B-4	Q8512	B-2	D8500	B-1	L8507	B-4	L8530	A-2	L8553	A-4
IC8503	A-1	Q8513	B-2	D8501	B-1	L8508	B-4	L8531	A-2	L8554	A-4
		Q8514	A-3	D8502	B-2	L8509	B-4	L8532	A-2	L8555	A-4
Q8500	A-1	Q8515	A-3	D8503	B-2	L8510	B-4	L8540	A-4	L8556	A-4
Q8501	A-1	Q8516	B-3	D8504	A-3	L8520	A-1	L8541	A-4		
Q8502	A-1	Q8517	A-3	D8505	A-3	L8521	A-1	L8542	A-4	DL8500	A-2
Q8503	A-1	Q8518	A-3			L8522	A-1	L8543	A-4		
Q8504	B-1	Q8519	A-3	L8500	B-2	L8523	A-1	L8544	A-4	VR8500	B-2
Q8505	A-4	Q8521	A-3	L8501	B-2	L8524	A-1	L8545	A-4	VR8501	A-4
Q8506	A-2	Q8522	A-4	L8502	B-2	L8525	A-1	L8546	A-4		
Q8508	A-2	Q8523	B-4	L8503	A-3	L8526	A-1	L8547	A-4		
Q8509	A-1	Q8524	B-4	L8504	B-3	L8527	A-2	L8550	A-4		

PARTS ADDRESS : PCB-VIDEO-COPY

SYMBOL NO.	ADDRESS	SYMBOL NO.	ADDRESS	SYMBOL NO.	ADDRESS	SYMBOL NO.	ADDRESS	SYMBOL NO.	ADDRESS	SYMBOL NO.	ADDRESS
IC8000	B-1	Q8000	C-4	Q8035	C-2	L8006	E-4	L8040	D-3	R8106	A-1
IC8001	D-1	Q8001	D-3	Q8036	C-2	L8007	E-4	L8041	D-3	R8121	D-2
IC8002	C-1	Q8002	D-3	Q8037	A-1	L8008	E-4	L8042	D-3	R8122	C-3
IC8003	E-4	Q8003	C-2	Q8038	B-1	L8009	E-4	L8043	D-4	R8123	C-3
IC8004	E-3	Q8004	A-4	Q8039	B-2	L8010	E-4	L8044	D-4	R8124	C-3
IC8005	E-3	Q8005	B-3	Q8040	B-1	L8011	E-4	L8045	B-4	R8138	B-1
IC8006	E-3	Q8006	B-3			L8012	E-4	L8046	B-4		
IC8007	E-4	Q8007	B-3	D8003	C-3	L8013	E-4	L8047	B-4	VR8000	D-4
IC8008	D-1	Q8008	B-3	D8004	D-4	L8014	D-4	L8048	B-4	VR8001	A-3
IC8009	D-2	Q8009	B-3	D8005	D-4	L8015	D-4	L8050	A-4	VR8002	A-2
IC8010	D-1	Q8010	B-4	D8012	E-4	L8016	D-4	L8051	A-4	VR8004	A-2
IC8011	D-1	Q8011	A-4	D8013	E-4	L8017	D-4	L8052	C-4	VR8005	B-1
IC8012	D-1	Q8014	A-3	D8018	E-4	L8018	D-4	L8053	C-4	VR8006	A-1
IC8013	D-1	Q8015	A-3	D8019	E-4	L8019	E-4	L8054	C-4	VR8007	A-2
IC8014	D-1	Q8016	A-3	D8020	E-4	L8020	E-4	L8055	C-4	VR8008	A-1
IC8015	D-1	Q8017	A-3	D8023	C-4	L8021	D-4	L8056	C-4		
IC8016	A-3	Q8018	A-3	D8024	C-4	L8022	D-4	L8057	D-4	CF8000	D-3
IC8017	A-2	Q8019	A-2	D8025	C-4	L8023	D-4	L8058	D-4		
IC8018	A-1	Q8020	A-2	D8026	C-4	L8024	A-1	L8085	B-4	S8000	D-4
IC8019	D-2	Q8021	A-2	D8028	C-3	L8025	A-1	L8086	E-3		
IC8020	B-1	Q8022	A-2	D8029	C-3	L8026	A-1	L8087	E-4	TP1	A-3
IC8021	B-3	Q8023	A-2	D8030	C-3	L8027	A-1	L8088	E-3	TP2	A-2
IC8022	B-3	Q8024	A-1	D8031	C-3	L8029	D-4	L8096	E-3	TP3	A-2
IC8023	B-3	Q8025	C-2	D8040	A-3	L8030	E-4	L8100	B-1	TP4	A-2
IC8024	D-3	Q8026	C-2	D8041	A-2	L8031	D-3	L8101	B-1	TP5	A-1
IC8025	C-2	Q8027	C-3	D8042	A-3	L8032	D-3	L8102	B-1	TP6	A-1
IC8026	B-1	Q8028	C-3			L8033	D-3	L8103	B-1	TP7	A-2
IC8027	C-1	Q8029	C-3	L8000	E-4	L8034	D-3			TP8	C-2
IC8028	B-1	Q8030	C-3	L8001	E-4	L8035	D-3	R8013	C-4	TP9	E-1
IC8029	C-3	Q8031	C-3	L8002	E-4	L8036	D-3	R8024	E-3	TP10	A-2
IC8030	C-3	Q8032	C-3	L8003	C-4	L8037	D-3	R8032	E-3		
IC8031	C-2	Q8033	C-3	L8004	C-4	L8038	D-4	R8039	B-3		
		Q8034	C-3	L8005	B-4	L8039	D-4	R8045	B-3		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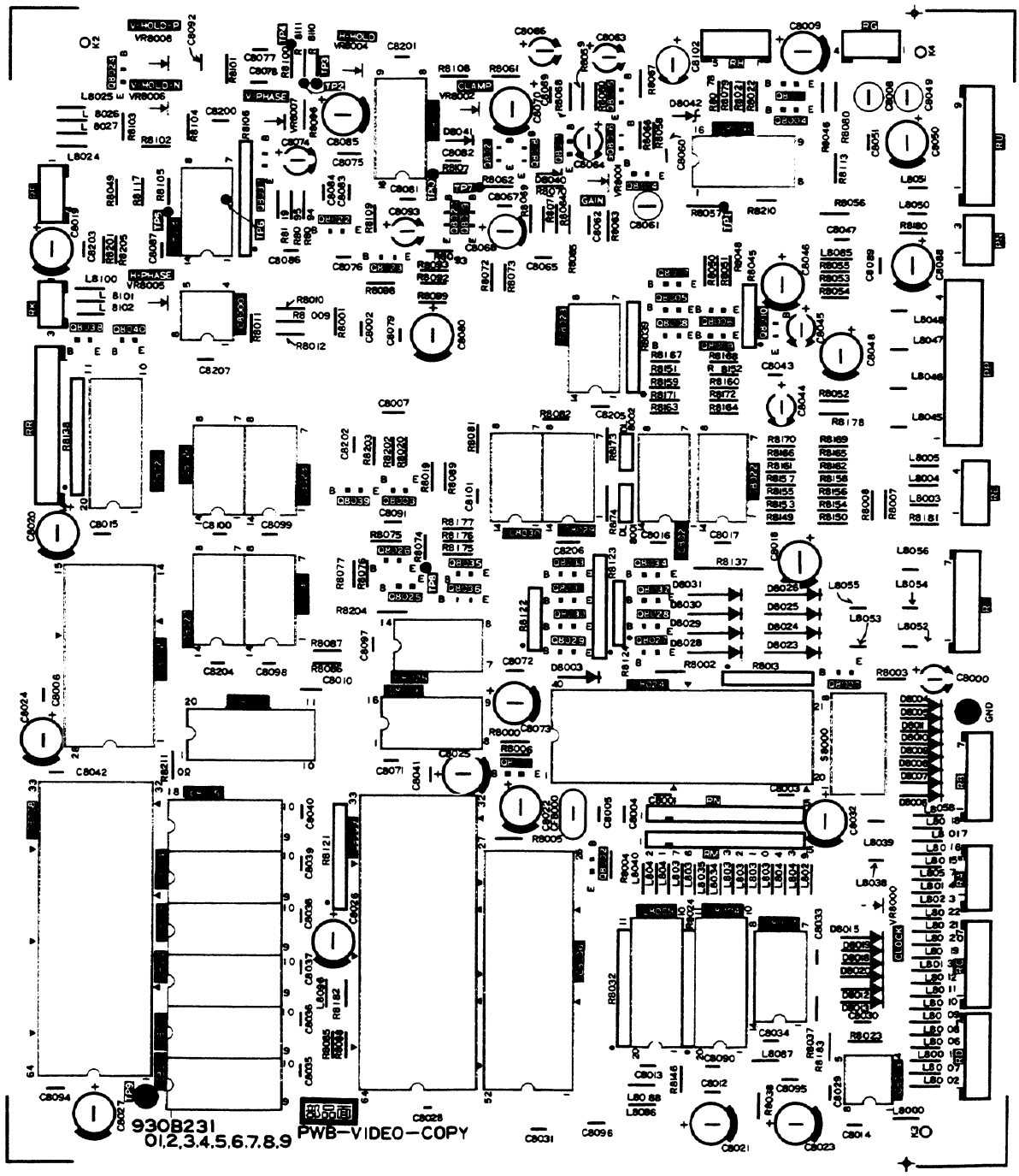
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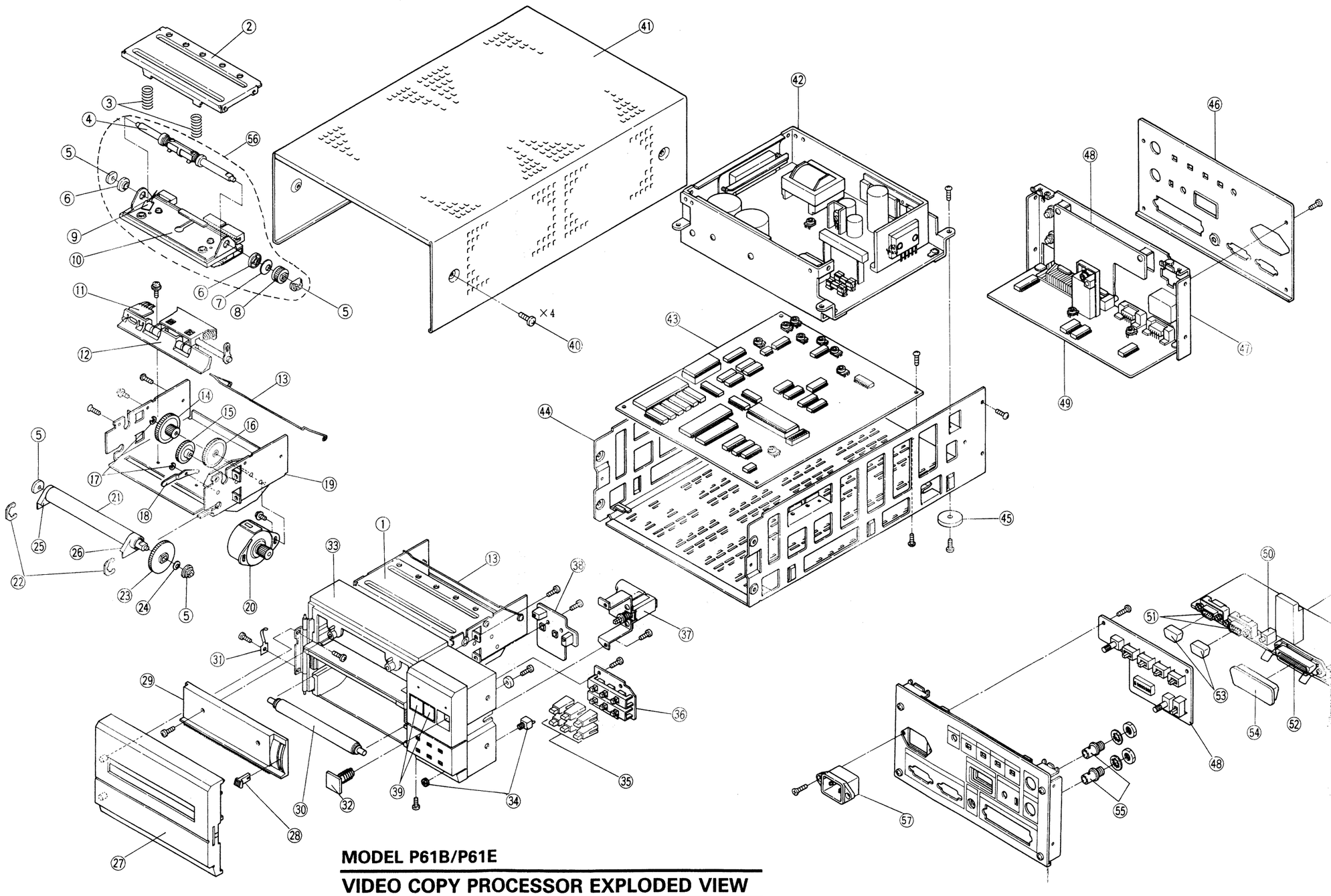
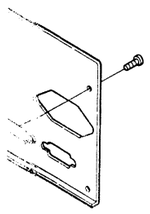
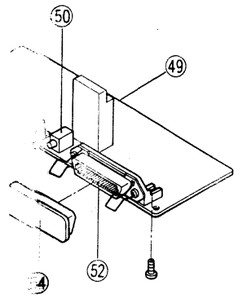
01,2,3,4,5,6,7,8,9
PWB-VIDEO-COPY
部品面



MODEL P61B/P61E

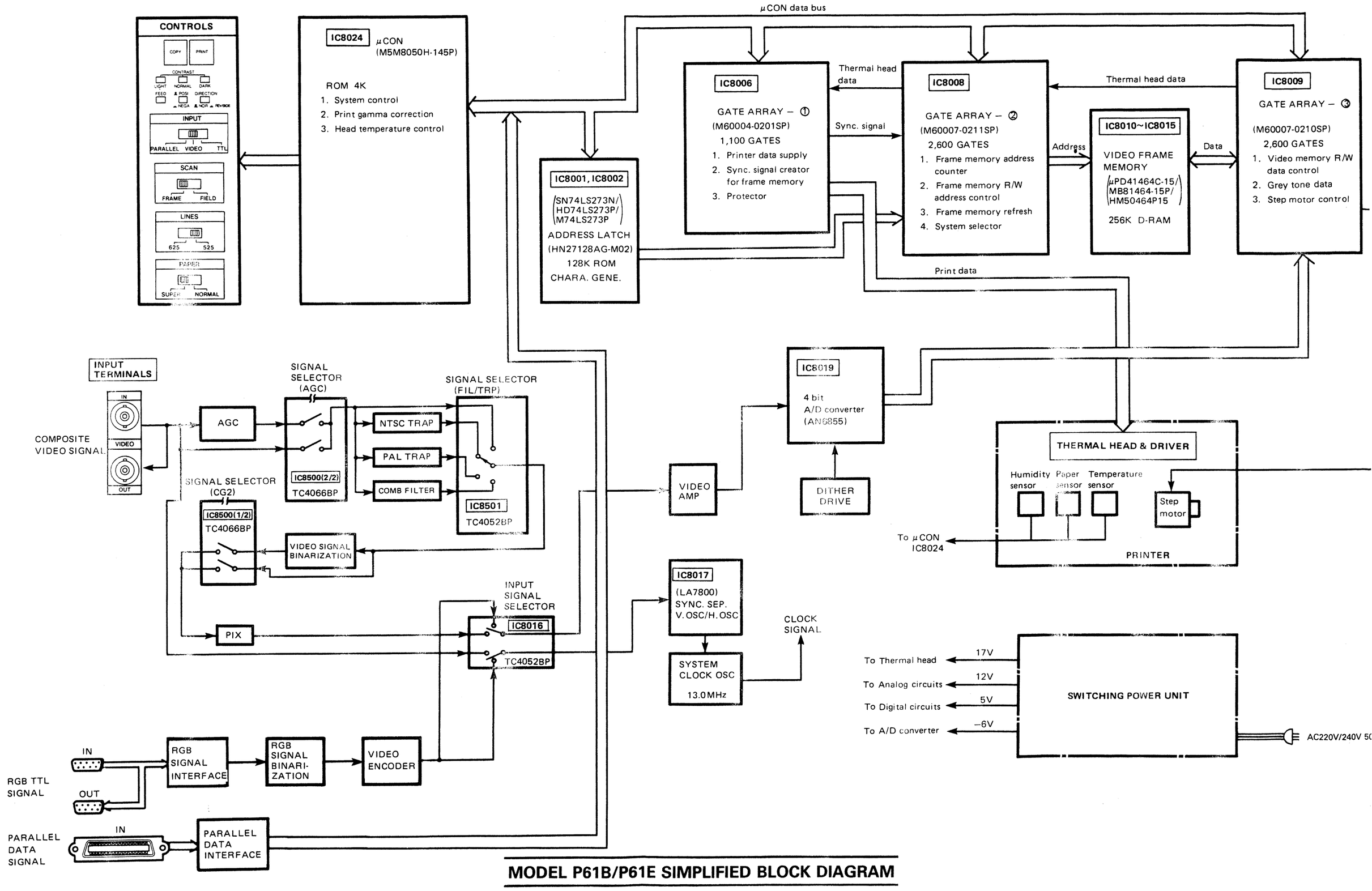
VIDEO COPY PROCESSOR EXPLODED VIEW





ILL. NO.	PART NAME	PART NO.	DESCRIPTION
1	Printer assembly	939P13403	
2	Cover assembly	☆	LF320Y129G05
3	Spring-A	☆	LF420S425H02 2.7kg
4	Shaft-A	☆	LF420Z764H05
5	Bushing-A	☆	LF420Z765H02
6	Bushing-B	☆	LF420Z766H04
7	Washer	☆	LK9900545S00
8	Gear-B	621D26202	LF420G751H04
9	Humidity sensor assembly	299D14701	LQ993A001Y00
10	Thermal head assembly	460D01001	LF421Y818G01
11	Paper·Temperature sensor assembly	299D14501	LF421Y586G01
12	Paper guide	☆	LF220Y043G06
13	Spring holder	☆	572D12101
14	Gear-D	621D26204	LF420Y418H01
15	Gear-C	621D26203	LF420G752H02
16	Gear-E	621D26205	LF420Y419H01
17	E-Ring	685D02301	LK8803000S33
18	Lever assembly	☆	LF420Y758G03
19	Case assembly	☆	LF320Z123G04
20	Step motor	288D01701	LQ802V001Y00
21	Platen assembly	940D06201	LF320Y131G03 (⑤,㉓,㉔,㉕,㉖)
22	Bushing	621D26301	LF420Z761H04
23	Gear-A	621D26201	LF420G750H03
24	Washer	☆	LK9900545S00
25	Spacer-L	☆	LF420Z760H02
26	Spacer-R	☆	LF420Z759H02
27	Door	702C66506	
28	Knob-lever	734D09601	
29	Cutter panel	761C27801	
30	Paper shaft assembly	531D19401	
31	Spring	☆	570D79701
32	Knob-power	704C37006	
33	Front panel	701A38102	
34	Remote jack	451C02701	
35	Knob-switch	734D08206	1pc.
36	Switch-P-PCB	930C10402	
37	Power switch	432C03202	
38	LED-P-PCB	930C19704	
39	Push button	704C37008	
40	Screw	☆	669D22309 3×10
41	Cabinet	710A03206	
42	Power unit	939P17603	
43	Video copy-PCB	930B23102	
44	Flame	☆	590A14606
45	Foot	771D05101	
46	Rear panel	☆	591B37401
47	Terminal plate	☆	591B37301
48	Terminal-PCB	920D08204	
49	Video-PCB	930C17602	
50	Remote jack	451C08401	

ILL. NO.	PART NAME	PART NO.	DESCRIPTION
51	TTL Connector	452C03901	DSUB
52	PARALLEL DATA Connector	452C04001	
53	Cover-TTL Connector	621D25901	
54	Cover-PARALLEL DATA Connector	621D26001	
55	BNC Connector	452D10601	
56	Upper head assembly	☆	LF320Y130G07
57	Power-jack	451D04601	

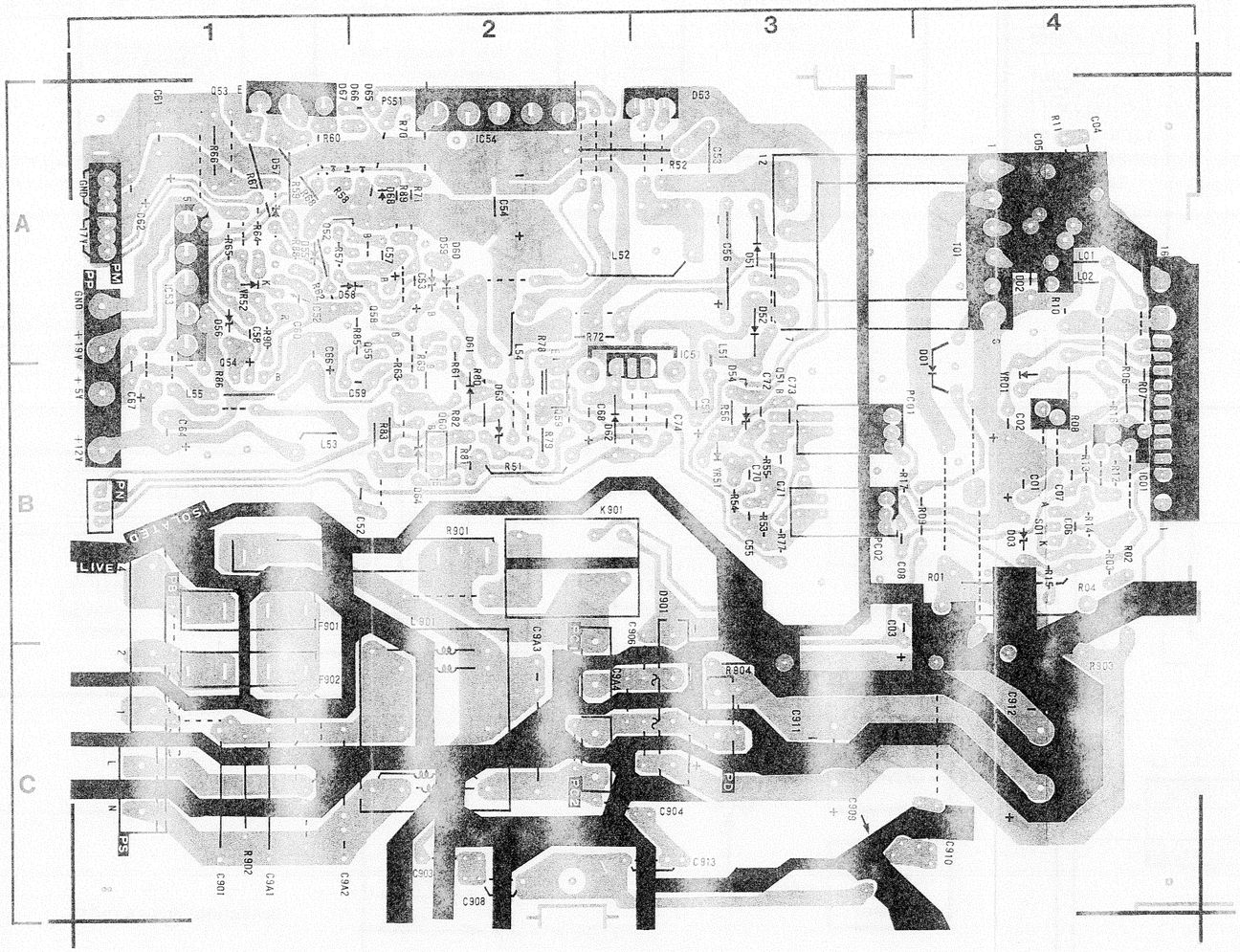


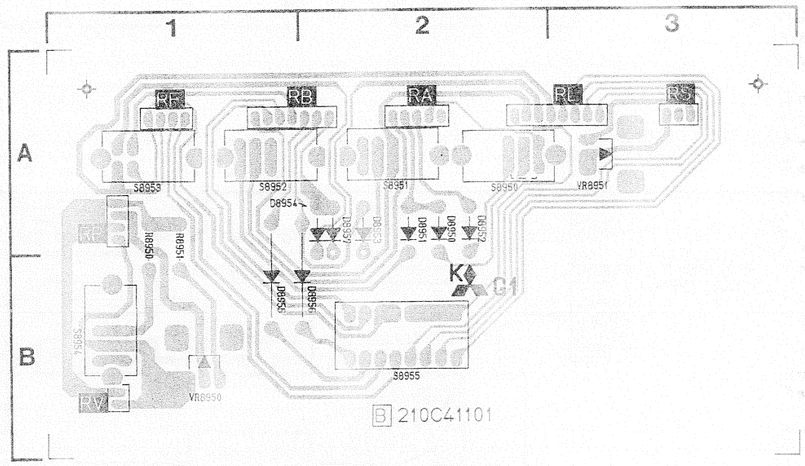
MODEL P61B/P61E SIMPLIFIED BLOCK DIAGRAM

009

ARRAY – ③

-0210SP)
GATES
memory R/W
control
tone data
motor control





AC220V/240V 50Hz

VIDEO-PCB

1 2 3 4 5 6 7 8

A B C D E

TERMINAL-PCB RP

VIDEO-COPY-PCB RG

REMO

< AGC >

Q8500 2SC1583-F AGC AMP-1

Q8501 2SC1583-F AGC AMP-2

Q8510 2SC2724-C,D INPUT BUFFER

Q8502 2SC2724-C,D AGC AMP-3

Q8503 2SC2724-C,D AGC AMP-3

Q8504 2SA1115-E,F AGC OUTPUT

Q8508 2SC2724-C,D PEAK DETECTION

Q8509 2SC2724-C,D PEAK HOLD

Q8506 2SA1115-E,F PEDESTAL CLAMP-2

Q8505 2SA1115-E,F PEDESTAL CLAMP-1

IC8500(2/2) SIGNAL-SELECTOR

< TRAP,FILTER >

Q8511 2SC2724-C,D TRAP BUFFER

Q8512 2SC2724-C,D NTSC TRAP OUTPUT

Q8513 2SC2724-C,D PAL TRAP OUTPUT

Q8514 2SC2724-C,D COMB FILTER OUTPUT

DL8500 1HDL

IC8501 TC4052BP MC14052BCP HD14052B SIGNAL SELECTOR②

IC8502 TC4011BP MC14011BCP QUAD2 INPUT NAND GATE

TERMINAL-PCB RS

SHARPNESS-VR

Q8515 2SC2724-C,D COMPARATOR BUFFER

Q8516 2SC2724-C,D PEDESTAL CLAMP-3

Q8517 2SC1583-F COMPARATOR

Q8518 2SC2724-C,D COMPARATOR OUTPUT

IC8500 (1/2) TC4066BP SIGNAL SELECTOR-1

Q8519 2SC1583-F SHARPNESS-2

Q8521 2SC2724-C,D SHARPNESS-1

Q8522 2SC2724-C,D SHRPNESS OUT PUT

Q8525 DTA124F INVERTER

THRESHOLD LEVEL

(COMPARATOR)

(SHARPNESS)

VIDEO-COPY-PCB RG
REMOTE-IN J8004
TERMINAL-P-PCB RL
VIDEO-COPY-PCB RH

< TRAP,FILTER >

Q8512
2SC2724-C,D
NTSC TRAP OUTPUT

L8501
NTSCTRAP
3.58M

Q8513
2SC2724-C,D
PAL TRAP OUTPUT

L8502
PALTRAP
4.43M

Q8514
2SC2724-C,D
COMB FILTER OUTPUT

DL8500
1HDL

IC8501
TC4052BP
MC14052BCP
HD14052B
SIGNAL SELECTOR②

IC8502
TC4011BP
MC14011BCP
QUAD2 INPUT
NAND GATE

RN8500 47KX4

L8506 ～ L8510
6.8μHX5

Q8523
DTA124F
REMOTE SWITCH-1

Q8524
DTC124F
REMOTE SWITCH-2

NTSC/PAL
SW-AGC
SW-COMB
SW-TRAP
SW-V2
→ VIDEO OUT
→ TO SYNC SEPA
← TO CLAMP

RR → VIDEO-COPY-PCB RR

G GND
5V
D0
PAPER
STOROBE
BUSY
ACK

J8001
PARALLEL
DATA-IN

RN8501
10KX8
R-NETWORK

L8520 ～ L8532
2.2μHX13

IC8503
SN74LS244N
PARALLEL
DATA
BUFFER

L8551-L8556
2.2μHX6

L8540-L8547
1μHX8

RU → VIDEO-COPY-PCB RU

J8003
RGB-TTL-IN

J8002
RGB-TTL-OUT

J8001
PARALLEL
DATA-IN

VIDEO-

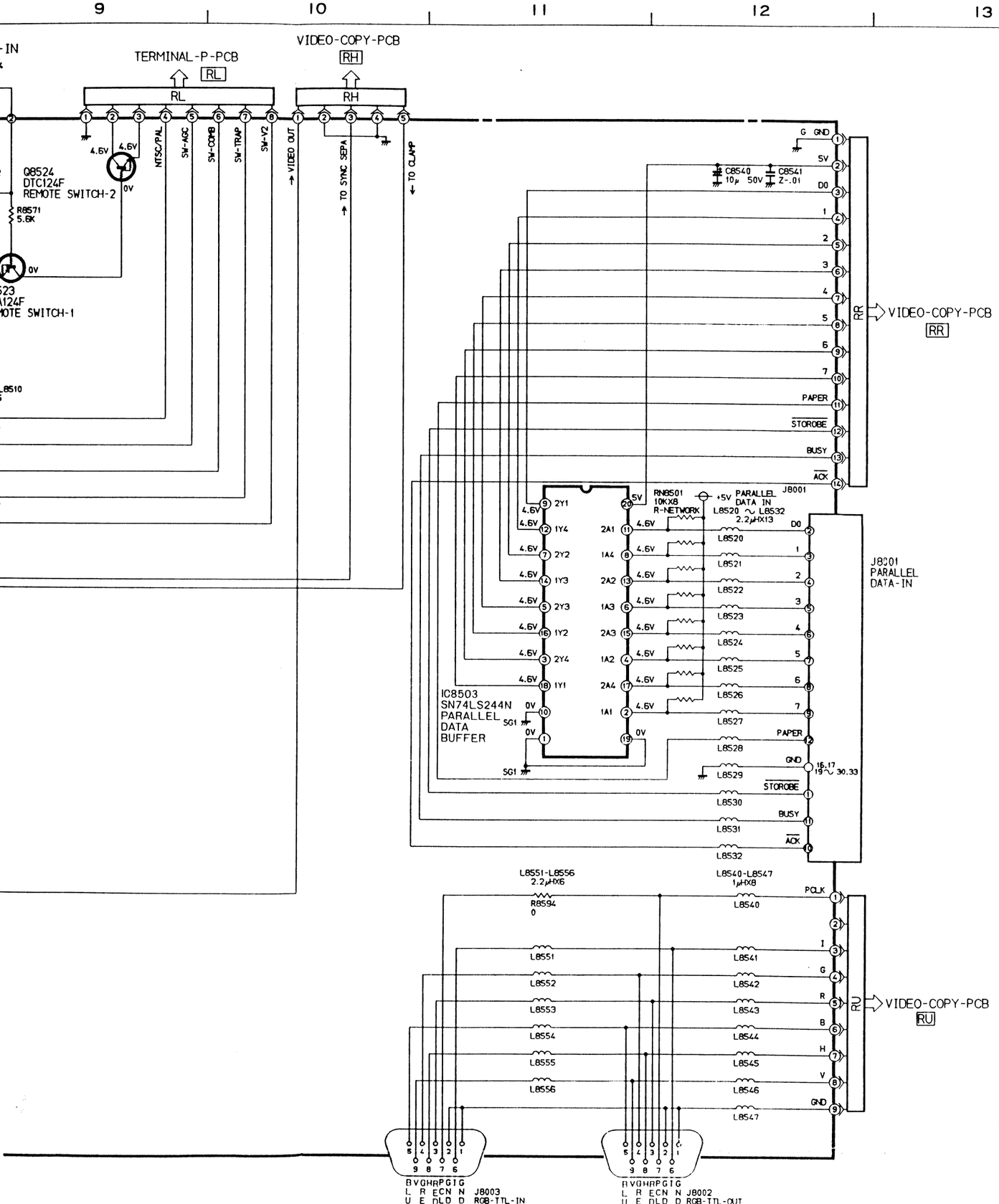
VIDEO-

VIDEO

VIDEO

PNESS)

Q8522
2SC2724-C,D
SHRPNESS
OUT PUT



⚠

SERVICING PRECAUTION

SYMBOLS INDICATE COMPONENTS HAVING SPECIAL CHARACTERISTICS IMPORTANT TO SAFETY AND PERFORMANCE. THEREFOR REPLACEMENT OF ANY SAFETY PARTS SHOULD BE IDENTICAL IN VALUE AND CHARACTERISTICS.

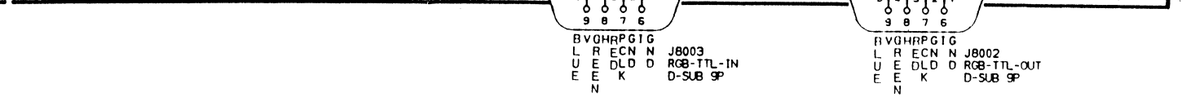
DON'T DEGRADE THE SAFETY OF THE RECEIVERS THROUGH IMPROPER SERVICING.

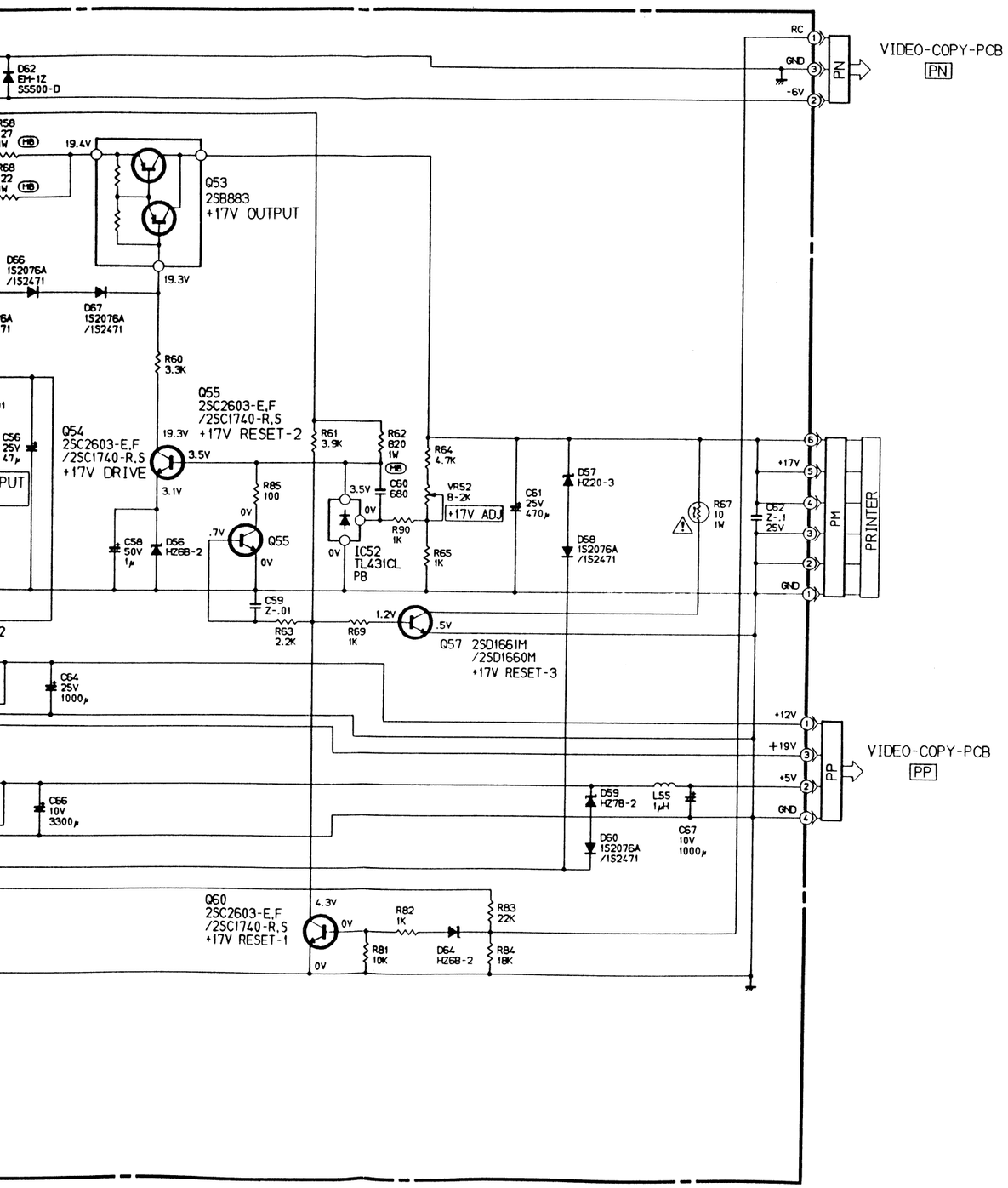
⚠

Sicherheitshinweis :

Die mit diesem Symbol gekennzeichneten Bauteile haben spezielle Eingenschaften und sind für die Sicherheit und Leistungsfähigkeit wichtig. Beim Austausch der Bauteile nur Teile mit gleichem Wert und Eigenschaften verwenden, sonst ist die Sicherheit und Leistung des Gerätes gefährdet.

Nur Teile mit gleichem Wert und Eigenschaften verwenden, sonst ist die Sicherheit und Leistung des Gerätes gefährdet.





Hinweis 1 :

1. Bezeichnung der Widerstände
   Keine Bezeichnung = Ohm
   K = 1000 Ohm
   M = 1000 K Ohm
2. Widerstände ohne Leistungsangabe unter 1/4 Watt.
3. Widerstände ohne Bezeichnung sind Kohlewiderstände
4. Die Symbole für die Widerstände sind wie folgt:
   - (CE) : Zementwiderstände
   - (MB) : Metalloxyd-Widerstände (Type B)
   - (MPC) : Metallüberzogene Zementwiderstände
   - (S) : Fester Ausgleichswiderstand
   - (W) : Drahtwiderstand
   - (M) : Metalfilm-Widerstand
5. Die Toleranzbezeichnung ist
   ohne Bezeichnung ±5%, K= ±10%, M= ±20%
6. Die nicht besonders bezeichneten Kundensatoren
   a) μF für Zahlen unter 1
   b) pF für Zahlen über 1
7. Kondensatoren ohne Bezeichnung sind Keramik-Kondensatoren, ausgenommen Elektrolyt-Kondensatoren.
8. Für die Kondensatoren werden folgende Symbole verwendet:
   - (ALM) : Aluminium-Elektrolyt-Kondensatoren
   - (MF) : Polyester-Kondensatoren
   - (PP) : Polypropylene-Schichtkondensator
   - (TANT) : Tantal-Kondensator
   - (TF) : Doppelschichtkondensator
   - (MF-PP) : Polyester-Polypropylene-Kondensator
   - (MPP) : Metallisierter-Plastikfilm-Kondensator
   - (NP) : Ungepolter-Elektrolyt-Kondensator
   - ⧺ : Elektrolyt-Kondensator
9. Die Gleichstrom Spannungsfestigkeit der nicht besonders bezeichneten Kondensatoren beträgt:
   50V
10. Die Toleranz der nicht besonders bezeichneten Kondensatoren beträgt: ±10% für Polyester-Kondensatoren
    ± 5% für Keramik-Kondensatoren
    Sonstige Toleranzen
    J = ±5% K = ±10% M = ±20% N = ±30%
    P = +100%, −0% Z = +80%, −20%
    C = ±0.25pF D = ±0.5pF F = ±1pF
11. Keramik-Kondensatoren mit den Bezeichnungen RH, UJ, SL usw. sind Temperatur-Kompensations-Kondensatoren.

Schaltungssymbole			
Zener Diode		Varistor	
Varicap		Keramikeinheit	
Posistor		Luftspalt	
Thermistor		Bauteile (Widerstand) auf der Printseite der Platine	
Sicherungswiderstand		Keramikfilter	

Hinweis 2 :

1. Die Gleichspannungen wurden vom angezeigten Punkt gegen Schaltungsmasse mit einem Hochohm-Voltmeter gemessen.
2. Das ist ein Basisschaltplan. Technische Änderungen zwecks Verbesserungen sind vorbehalten.

SCHEMATIC DIAGRAM

MODEL : P61B/P61E

NOTE 1:

1. The unit of resistance is "ohm" with no symbol.
   Accordingly, K = 1000 ohms
   M = 1000K ohms.
2. The wattage of resistors, if not specifically designated, **is less than 1/4 watt.**
3. **Resistors, if not specifically designated, are carbon resistors.**
4. **The marks of resistors are as follows:**
   - (CE) : Cemented resistor
   - (MB) : Metal oxide film resistor (type B)
   - (MPC) : Metal plate cement resistor.
   - (ML) : Metal linear resistor.
   - (S) : Fixed composition resistor
   - (W) : Wire wound resistor
   - (M) : Metal film resistor
5. **The tolerance of resistor value, if not specifically designated, is: ±5%, K = ±10% M = ±20%**
6. **The unit of capacitance, if not specifically designated, is:**
   a) μF, for numbers less than 1
   b) PF, for numbers more than 1
7. **Capacitors, if not specifically designated are Ceramic capacitors except electrolytic capacitors.**
8. **The marks of capacitors are as follows:**
   - (ALM) : Aluminus electrolytic capacitor
   - (MF) : Polyester capacitor
   - (PP) : Polypropylene film capacitor
   - (TANT) : Tantalum capacitor
   - (TF) : Twin film capacitor.
   - (MF.PP) : Polyester polypropylene film capacitor.
   - (MPP) : Metallize plastic film capacitor.
   - (NP) : Non polarized electrolytic capacitor.
   - ⧺ : Electrolytic capacitor
9. **The DC working voltage of capacitor, if not specifically designated is: 50V**
10. **The tolerance of capacitor value, if not specifically designated is: ±10% for polyester capacitor**
    ±5% for ceramic capacitor
    and J =±5% K =±10% M =±20% P = +100% / −0%
    C =±0.25PF D = ±0.5PF F =±1PF Z = +80% / −20% N = ±30%

SPECIFIC SYMBOL			
Zener Diode		Varistor	
Varicap		Crystal unit	
Posistor		Air Gap	
Thermistor		Part (resistor) attached on the copper-foil side of PCB	
Fusible Resistor		Ceramic filter	

NOTE 2:

1. DC voltages were measured from points indicated to the circuit ground with a high-Z voltmeter.
2. This is a basic schematic diagram. Some sets may be subject to modification according to engineering improvement.

Printed in JAPAN

PCB

VIDEO-COPY-PCB
RC

POWER-PCB

J8003
RGB-TTL-IN
D-SUB 9P

ISOLATED

IC01 STK7408B MAIN SW-REG

STARTING CIRCUIT
BIAS
OSC.PWM
DRIVER

T01

MAIN SW -REG ADJ

IC51 -6V REG AN78 N06

Q51 2SC2603-E,F MAIN ERROR DETECTOR

Q53 2SB883 +17V OUTPUT

Q54 2SC2603-E,F /2SC1740-R,S +17V DRIVE

Q55 2SC2603-E,F /2SC1740-R,S +17V RESET-2

MAIN OUTPUT ADJ

IC52 TL431CL PB

+17V ADJ

Q57 2SD1661M /2SD1660M +17V RESET-3

IC53 STR2012 12V SW-REG

IC54 STR2005 5V SW-REG

Q58 2SA673-C,D POWER-RESET-1

Q59 2SC2603-E,F /2SC1740-R,S POWER-RESET-2

Q60 2SC2603-E,F /2SC1740-R,S +17V RESET-1

POWER-RESET-3

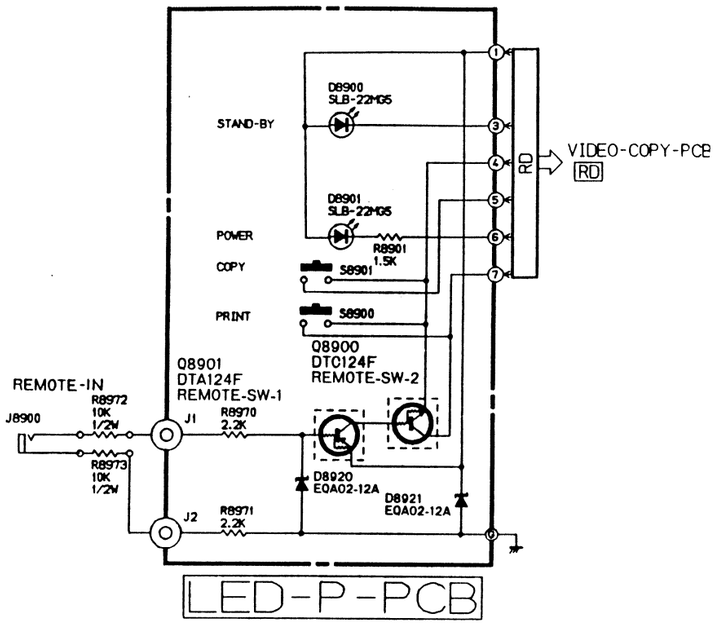
S991 POWER-SW

PS PC1 PC2

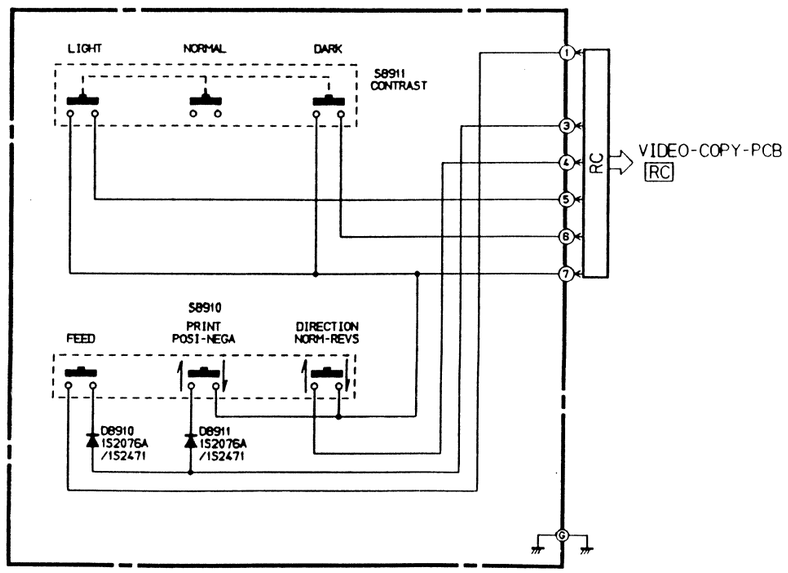
PC01 TLP580
PC02 TLP580

LIVE

The wattage of resistor, if not specifically designated, is 1/6 watt.

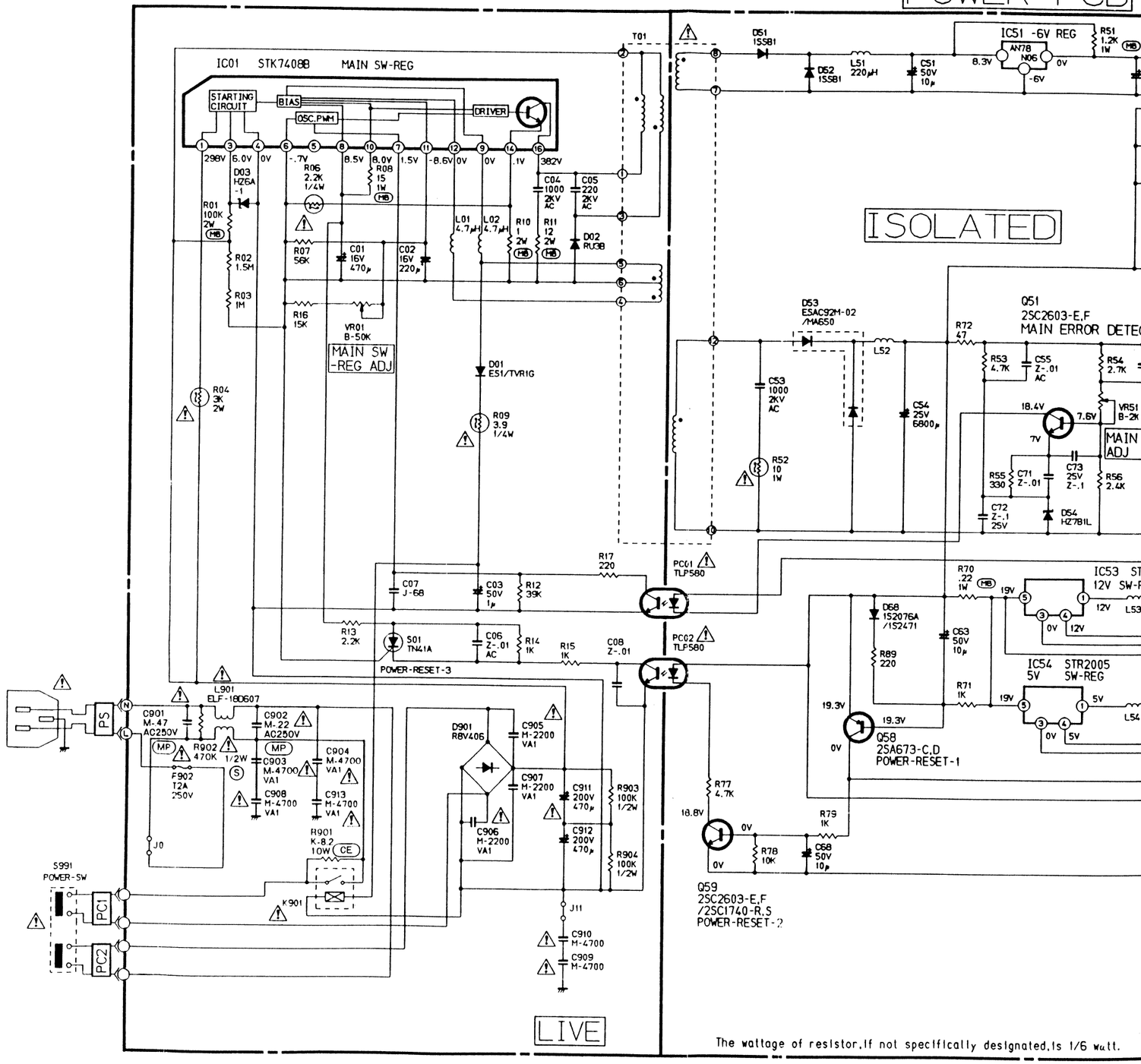


LED-P-PCB



SW-P-PCB

POWER-PCB



The wattage of resistor, if not specifically designated, is 1/6 watt.

VIDEO-COPY-PCB

Q8000
2SC2603-E,F
/2SC2785-H,F,E
RESET ①

Q8002
2SC2603-E,F
/2SC2785-H,F,E
RESET ③

Q8001
2SC2603-E,F
/2SC2785-H,F,E
RESET ②

Q8040
DTC124F
PAPER-
DETECTION ②

Q8038
2SC2603-E,F
PAPER-
DETECTION ③

IC8000 (1/2)
μPC393C
PAPER-
DETECTION ①

IC8024
M5M8050H-145P
MICRO COMPUTER

IC8001
SN74LS273N
ADDRESS LATCH

IC8002
128K ROM
HN27128AG-M02

IC8031
TC74HC74P
MEMORY-FIELD
SELECTOR ①

IC8029
74ALS32
SN74LS32N
RGB-TTL
2-GRADATION ②

IC8027
TC74HC00P
RGB-TTL
2-GRADATION ①

IC8030
SN74LS02P
/HD74LS2P
RGB-TTL
2-GRADATION ③

IC8023
SN74LS00N
D/A
CONVERTER ⑦

Q8003
2SC2603-E,F
/2SC2785-H,F,E
HEAD-POWER DRIVE-1

Q8011
2SC2724-C,D
VIDEO-INPUT

PAPER-SENSOR

DEW-SENSOR

S8000
DIP-SW

LED-P-PCB

SW-P-PCB

TERMINAL-P-PCB

VIDEO-PCB

R8013
R-NETWORK
(6 PARTS)

TO THERMAL-HEAD

RGB2-GRADATION

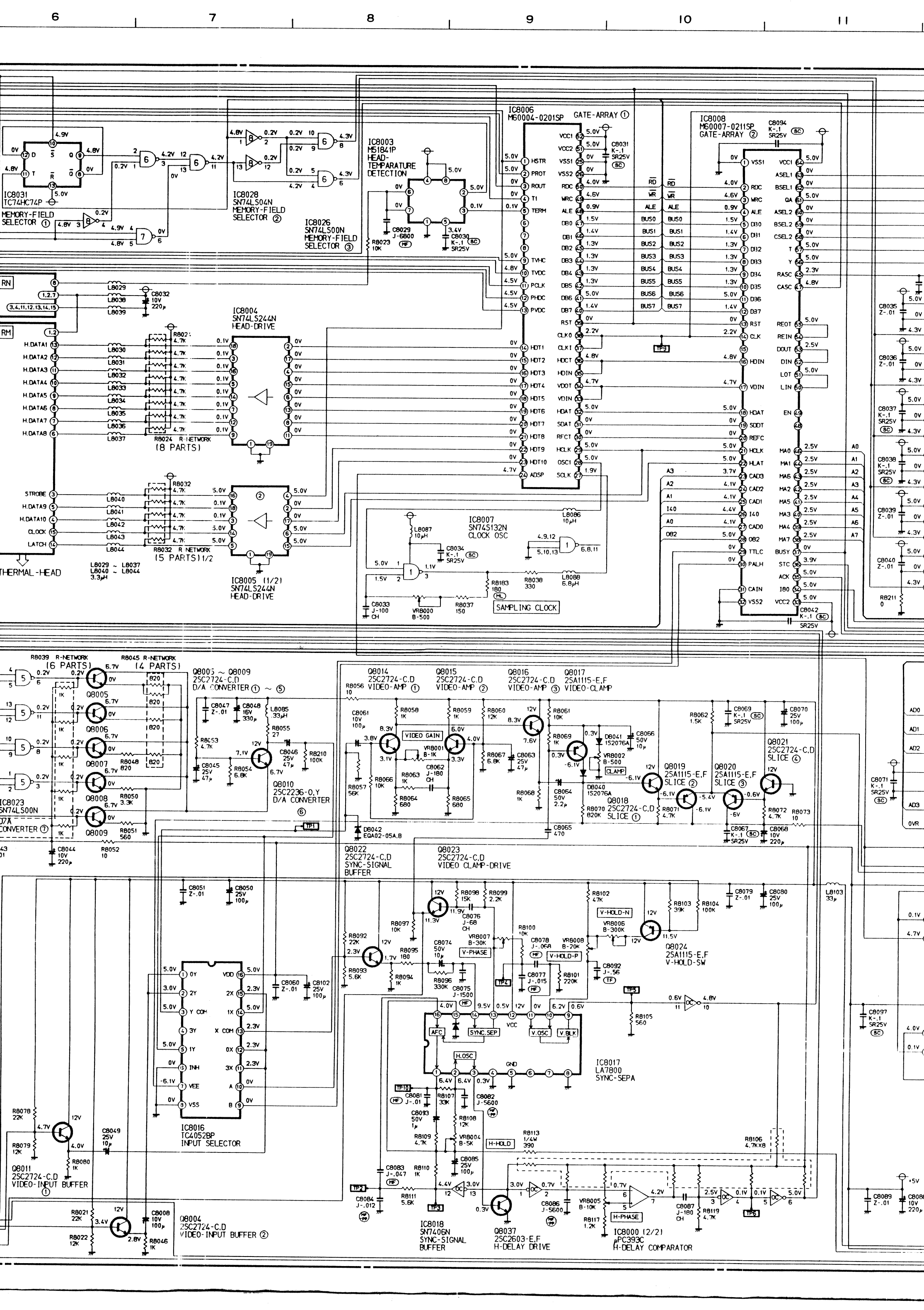
DITHER

TO SYNC-SEPA

A/D→CONVERTER

← H-PULSE

NTSC/PAL


IC8031 TC74HC74P
MEMORY-FIELD SELECTOR ①
IC8028 SN74LS04N MEMORY-FIELD SELECTOR ②
IC8026 SN74LS00N MEMORY-FIELD SELECTOR ③
IC8003 M51841P HEAD-TEMPARATURE DETECTION
IC8006 M60004-0201SP GATE-ARRAY ①
IC8008 M60007-0211SP GATE-ARRAY ②
IC8004 SN74LS244N HEAD-DRIVE
IC8005 (1/2) SN74LS244N HEAD-DRIVE
R8024 R-NETWORK (8 PARTS)
R8032 R-NETWORK (5 PARTS) 1/2
L8029 ~ L8037 L8040 ~ L8044 3.3μH
THERMAL-HEAD
IC8007 SN74S132N CLOCK OSC
SAMPLING CLOCK
R8039 R-NETWORK (6 PARTS)
R8045 R-NETWORK (4 PARTS)
Q8005 ~ Q8009 2SC2724-C,D D/A CONVERTER ① ~ ⑤
Q8010 2SC2236-O,Y D/A CONVERTER ⑥
IC8023 SN74LS00N D/A CONVERTER ⑦
Q8014 2SC2724-C,D VIDEO-AMP ①
Q8015 2SC2724-C,D VIDEO-AMP ②
Q8016 2SC2724-C,D VIDEO-AMP ③
Q8017 2SA1115-E,F VIDEO-CLAMP
VIDEO GAIN
CLAMP
Q8018 2SC2724-C,D SLICE ①
Q8019 2SA1115-E,F SLICE ②
Q8020 2SA1115-E,F SLICE ③
Q8021 2SC2724-C,D SLICE ④
Q8022 2SC2724-C,D SYNC-SIGNAL BUFFER
Q8023 2SC2724-C,D VIDEO CLAMP-DRIVE
Q8024 2SA1115-E,F V-HOLD-SW
Q8011 2SC2724-C,D VIDEO-INPUT BUFFER ①
Q8004 2SC2724-C,D VIDEO-INPUT BUFFER ②
IC8016 TC4052BP INPUT SELECTOR
IC8017 LA7800 SYNC-SEPA
IC8018 SN7406N SYNC-SIGNAL BUFFER
Q8037 2SC2603-E,F H-DELAY DRIVE
IC8000 (2/2) μPC393C H-DELAY COMPARATOR
V-HOLD-N
V-HOLD-P
V-PHASE
H-HOLD
H-PHASE
AFC
SYNC.SEP
V.OSC
V.BLK
H.OSC
VCC
GND

IC8009
M60007-0210SP
GATE-ARRAY ③

IC8010
256K D-RAM
PORTRAIT-MEMORY ①

IC8011
256K D-RAM
PORTRAIT-MEMORY ②

IC8012
256K D-RAM
PORTRAIT-MEMORY ③

IC8013
256K D-RAM
PORTRAIT-MEMORY ④

IC8014
256K D-RAM
PORTRAIT-MEMORY ⑤

IC8015
256K D-RAM
PORTRAIT-MEMORY ⑥

M5M4464P-15
μPD41464C-15

IC8019
AN6855T
A/D CONVERTER

IC8020
SN74LS374N
PARALLEL DATA BUFFER

SN74LS244N (2/2)

IC8021
SN74LS86N
HD74LS86P
RGB INTERFACE
① . ②

IC8025
SN74LS74AN
1/2,1/4 DIVIDER

Q8025
2SA1115-E,F
REFERENCE VOLTAGE ②

Q8026
2SC2603-E,F
REFERENCE VOLTAGE ①

Q8027
2SD1153
MOTOR-DRIVE ⑤

Q8028
2SD1153
MOTOR-DRIVE ⑥

Q8029
2SA1115-E,F
MOTOR-DRIVE ①

Q8030
2SA1115-E,F
MOTOR-DRIVE ②

Q8031
2SA1115-E,F
MOTOR-DRIVE ③

Q8032
2SD1153
MOTOR-DRIVE ⑦

Q8033
2SA1115-E,F
MOTOR-DRIVE ④

Q8034
2SD1153
MOTOR-DRIVE ⑧

Q8035
2SC2724-C,D
DITHER DRIVE ①

Q8036
2SC2724-C,D
DITHER DRIVE ②

R8121 R-NETWORK (4 PARTS)
R8122 〃 〃
R8123 〃 〃
R8124 〃 〃

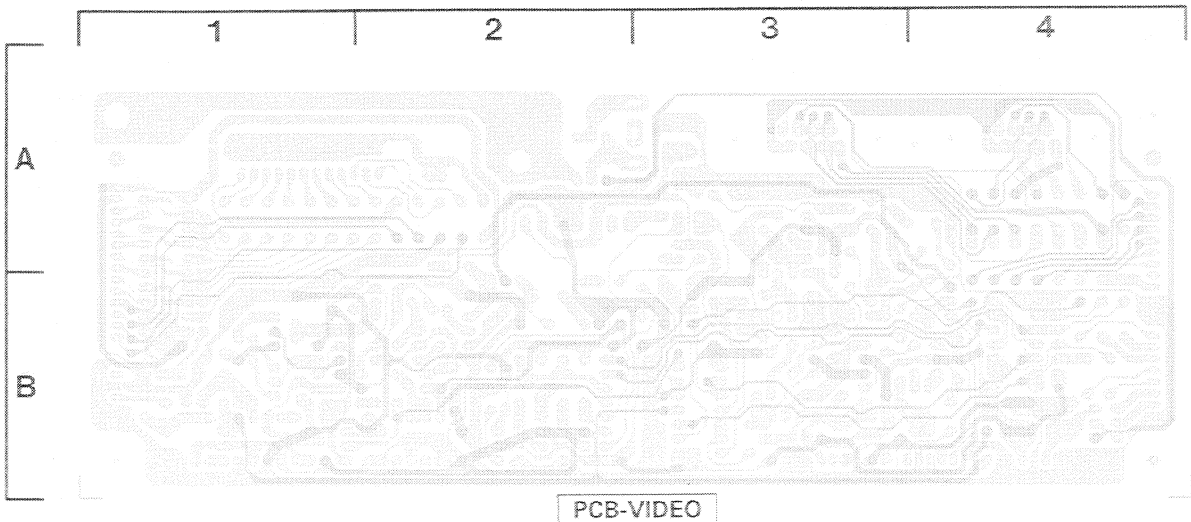
R8138 R-NETWORK (8 PARTS)

L8052 ~ L8056 RF
D8023 ~ D8031 S5500D EM-1Z ERB12-02RK

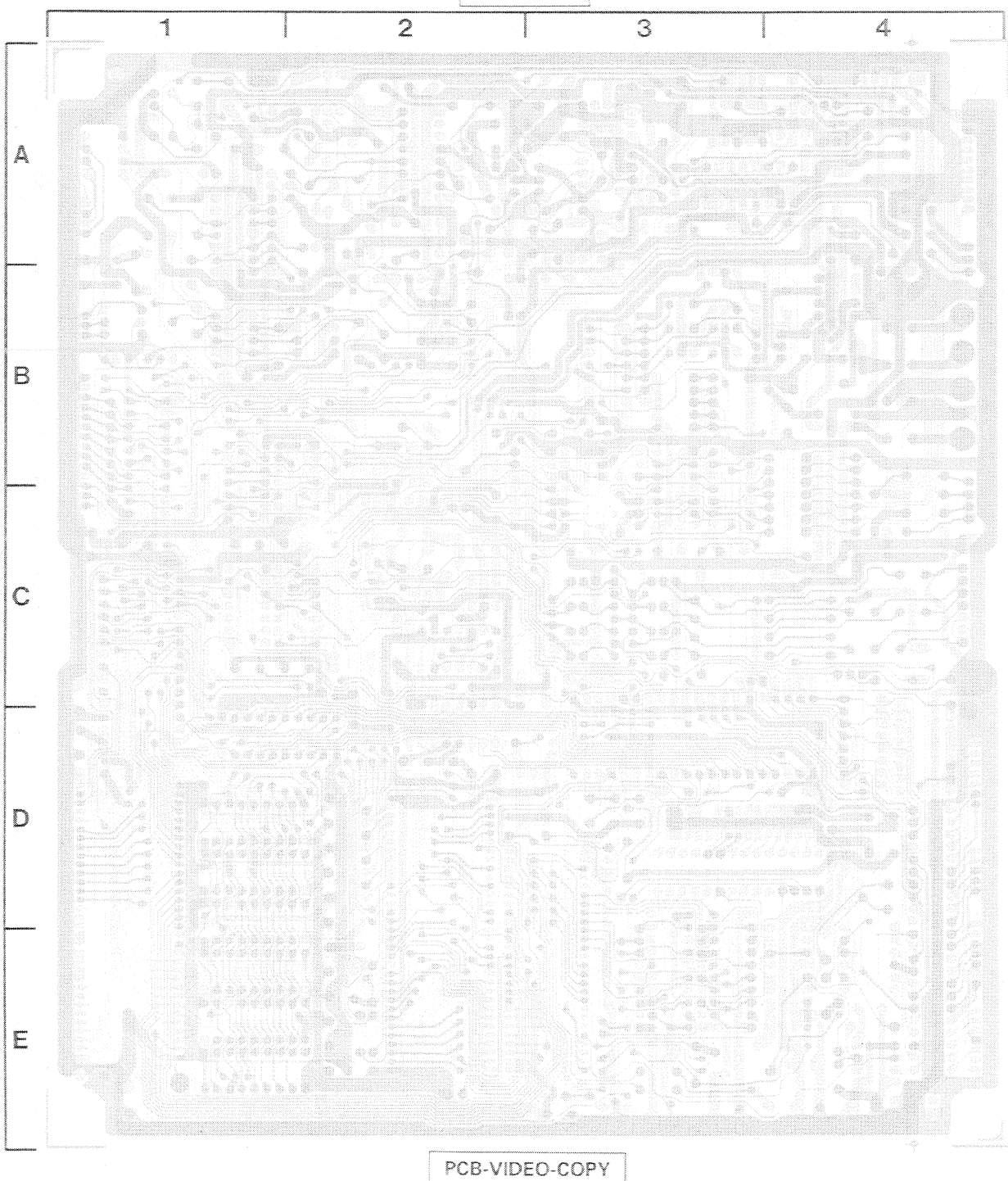
PRINTER

VIDEO-PCB (RR)
VIDEO-PCB (RU)
VIDEO-PCB (RG)
POWER-PCB (PP)
POWER-PCB (PN)

P61B/P61E (2/2)



PCB-VIDEO



PCB-VIDEO-COPY